MASS.

GC5.WM36:
T34

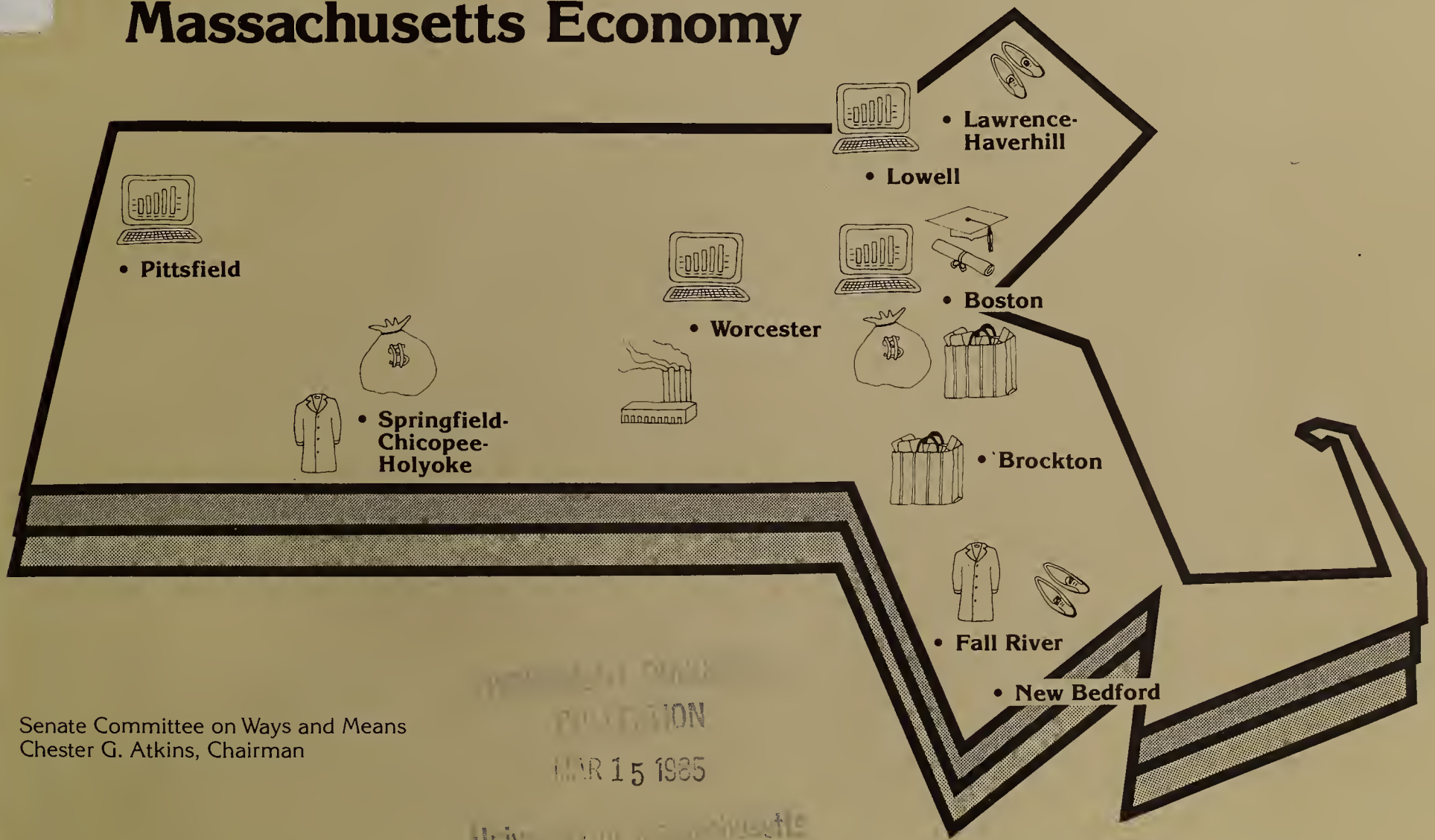
UMASS/AMHERST

312066 0282 3639 2

Digitized by the Internet Archive
in 2013

http://archive.org/details/thereismorethano00mass

There Is More Than One Massachusetts Economy



Senate Committee on Ways and Means
Chester G. Atkins, Chairman

MAR 15 1985

THERE IS MORE THAN ONE MASSACHUSETTS ECONOMY

A Study of Massachusetts Private Sector Employment:
The Major Growth Sectors of the Massachusetts Economy
And Their Impact on the State's Nine Major Labor Market Areas

Massachusetts Senate Committee on Ways and Means
Chester G. Atkins, Chairman

Fall 1984

TABLE OF CONTENTS

	Page
Summary	v
Highlights	vii
Introduction	xi
Definitions and Abbreviations	xvii
Part 1: Major Economic Growth Sectors	
High Technology	2
Services	14
Finance	24
Trade	34
Part 2: Labor Market Areas	
Massachusetts State Average	42
Boston	46
Brockton	52
Fall River	58
Lawrence-Haverhill	64
Lowell	70
New Bedford	76
Pittsfield	82
Springfield-Chicopee-Holyoke	88
Worcester	94
Appendices	
1. Projected Changes in Massachusetts Employment 1985 and 1986, and Projected Changes in U.S. Employment 1984-1990	103
2. Annual Average Unemployment Rates 1975-1983 and the 1984 Average	104
3. Massachusetts Annual Pay Levels, 1983, Compared with the U.S. Average	105
4. Summary Employment Statistics -- Massachusetts and Nine Major Labor Market Areas	106

SUMMARY

Massachusetts' strong employment growth has not been evenly distributed, either among employment sectors or throughout the state. Some regions of the state are not prospering so much as the statewide figures suggest; 43.9 percent of the state's population lives in areas of the state where cumulative employment growth was only 0.7 percent during the most recent years, 1979-1983. Growth has been concentrated in three labor market areas -- Boston, Lawrence-Haverhill, and Lowell. These areas experienced a cumulative employment growth of 8.5 percent during 1979-1983.

Growth also has been concentrated in services, high technology, finance, and trade. During 1979-1983 employment in these sectors increased by 11.8 percent; all other sectors combined had an employment decrease of 8.5 percent. The extent to which the state's various labor market areas (LMAs) have above- or below-average shares of their total employment in these growth sectors has directly affected their economic prosperity.

An unequal distribution of the state's economic prosperity can be expected in the future as well. Data Resources Inc.'s (DRI), forecast for average U.S. employment growth 1984-1990 is 12.5 percent.

Its forecast for the growth sectors exceeds that: services - 13.6 percent, finances - 18.3 percent, and trade - 13.3 percent. There is no DRI forecast for high technology employment, but its forecast for manufacturing sectors which largely comprise the Massachusetts high technology category is an average of 15.1 percent. The LMAs' shares of the state's total employment in these above-average growth sectors will continue to directly affect their economies.

In designing economic development and social service programs to meet the needs of all of the state's residents, the Committee believes that the varying outlooks for the state's several regional economies need to be considered.

Note: All references to total employment are to total private employment. Employment in local, state, and federal government is excluded.

HIGHLIGHTS

The Impact of the State's Major Employment Sectors on the State's Major LMAs

* In recent years, (1979-1983), services and the high technology portion of manufacturing have accounted for 97.6 percent of new jobs in Massachusetts.
* The growth in Massachusetts' service jobs has been concentrated in one LMA -- Boston. The Boston LMA's new service jobs accounted for 62.3 percent of the state's total service employment increase during the 1979-1983 period.
* Massachusetts' high technology job growth has been concentrated within three LMAs -- Boston, Lawrence-Haverhill, and Lowell. During 1979-1983 these LMAs accounted for 87.6 percent of the total increase in the state's high technology employment growth.
* The growth of finance jobs has been concentrated in two LMAs -- Boston and Springfield-Chicopee-Holyoke. The combined increase in finance employment in these two areas was 16.5 percent during 1979-1983. Finance employment in the rest of the state increased 7.6 percent during these years.
* Statewide employment in the state's nongrowth sectors -- agriculture, transportation-communications-public utilities, durable

manufacturing other than high technology, and nondurable manufacturing -- experienced a decline of 8.5 percent during 1979-1983.

Outlook for the State's Major Labor Market Areas

* The economic outlook for some Massachusetts LMAs is more favorable than for others; not all will have employment growth matching the statewide average. Clearly, the Boston LMA is the one most likely to parallel the statewide average since it has such disproportionately large shares of the state's employment, particularly in the growth sectors. The Lowell LMA's extraordinary expansion in employment -- four times the state average of 1979-1983 -- bodes well for its continued prosperity. The Lawrence-Haverhill LMA's rate of employment growth has been keeping up with the state average.

  The Worcester LMA, which actually lost total employment in the most recent years 1979-1983, may be on the verge of a turn-around considering its recent growth in high technology employment (second highest during both 1975-1983 and 1979-1983).

* The outlook for other Massachusetts' LMAs is less favorable than for the state as a whole. The Fall River LMA is the least likely

of the state's major LMAs to experience employment growth -- unless there is a substantial change in either the composition of its employment base or in the outlook for the nation's apparel manufacturers. The Fall River LMA has a large proportion of its employment in nondurable manufacturing, the sectors of the state's economy which have suffered the most serious job losses; and, to compound the situation, its shares of the state's fastest growth sectors -- high technology and services -- are disproportionately low.

* The outlook for the New Bedford and Springfield-Chicopee-Holyoke LMAs is also less optimistic than for the state as a whole because of the heavy concentrations of nondurable manufacturing, and relatively light representation of high technology and service industries.

INTRODUCTION

Purpose of Study

The Senate Committee on Ways and Means' study is designed to look beyond the averages of statewide employment statistics. In early 1984 an initial analysis, undertaken by the Committee in conjunction with projecting state budget revenues, showed that not all regions of the state were experiencing the same prosperous economic conditions as the state as a whole. The purpose of this study is to construct economic profiles of the major labor market areas (LMAs) as a first step towards forecasting their employment outlook. The Committee believes that the legislature's participation in the budget process should include an understanding of the varying needs -- for state assistance in economic development and social services -- of the state's regional economies.

Part 1. The State's Growth Sectors

Most of the state's job growth during the 1975-1983 period covered by this study took place in three non-manufacturing sectors -- services, finance, and trade -- and a high technology category comprised of 20 manufacturing categories defined by the Massachusetts Division of Employment Security (DES). On the basis of the Committee's Spring

1984 economic forecast, the product of a state econometric model developed in cooperation with Data Resources Inc., it is assumed that these sectors will continue to drive the state's economic expansion.

Part 1 analyzes the employment change of the four growth sectors during 1975-1983, and the geographic areas in which the greatest employment increases have taken place. In Part 1 the visual aids all refer to the period 1975-1983. The same group of tables is presented for each sector. The first table shows the percentage growth of employment in a particular sector relative to all other employment, 1975-1983; the second table shows the employment categories which contributed most to the sector's growth, 1975-1983; the third table shows the sector's percentage change in employment 1975-1983 in each geographic area; the fourth table shows each sector's percentages of change for the first and second halves of the 1975-1983 period in each area; and the fifth table shows Boston's share of the sector's total statewide employment. The Boston LMA's share of the four economic growth sectors is shown separately since the area's shares of these sectors are greater than one-half of the state's total.

Part 2. The Labor Market Areas Compared with the State

The geographic areas of the state analyzed in this study are the

labor market areas (LMAs) defined by the Bureau of Labor Statistics (BLS) with the assistance of the Massachusetts Division of Employment Security (DES). Most of Massachusetts is divided into LMAs -- clusters of cities and towns, generally around a central city. An LMA is defined as a region in which a person could reasonably be expected to be able to change jobs without having to change residence.

The nine LMAs included in this study represent 84.0 percent of the state's total 1980 population and 86.0 percent of its total 1983 private employment. DES classifies eight of the nine as the state's major labor market areas, the ninth (Pittsfield) was included in the study to encompass the western part of the state. The LMAs covered by this study are those of Boston, Brockton, Fall River, Lawrence-Haverill, Lowell, New Bedford, Pittsfield, Springfield-Chicopee-Holyoke, and Worcester. The cities and towns located in each LMA are listed in "Definitions and Abbreviations."

In Part 2 the visual aids are the same for each LMA: the first table shows the composition of employment of each LMA in 1983, the percentage of total employees in each major employment sector; the second table shows the percentage changes in employment in the most recent period, 1979-1983, for all employment sectors; and the third

table shows each LMA's share of total state employment for the four major growth sectors -- high technology, services, finance, and trade. The purpose of these tables is to show how much of each LMA's employment is in sectors which have been growing or declining. The experience of each LMA relative to these growth sectors, combined with the statewide forecast, provides a probable economic outlook for these areas during the next five years.

Years Studied, 1975-1983

Both LMAs and the Standard Industrial Classifications (SIC), sectors and categories into which employment data is grouped, are continually being redefined. The most recent redefinitions for both were in the mid-1970s. The year 1975 was the first year the LMAs used in this study were defined exactly as they were in 1983, the most recent year for which LMA data is available. 1975 was also the first year following the redefinitions of the employment sectors -- the SICs.

The year 1975 is also the year in which Massachusetts experienced the worst recession since the 1930s where the state's manufacturers suffered severe job losses and underwent a dramatic restructuring. Nondurable manufacturers never recovered employment to their pre-recession levels and durable manufacturing became dominated by high technology.

Source of Data

In cooperation with state agencies (in Massachusetts, DES) the BLS collects employment and wage data for all workers covered by state unemployment insurance laws and for civilian workers covered by the federal unemployment program. This data collection program originated with the Social Security Act of 1935, which authorized the collection of information for the purpose of enabling the federal government to monitor compliance with the federal unemployment compensation program.

The data collection program, known as the ES-202 program, is not a survey or sampling, but rather an employer census. It is estimated that the program currently covers 90.0 percent of all civilian employment. The principal groups not included are members of the armed forces, railroad employees, domestic workers, some agricultural workers, some employees of nonprofit organizations, and the self-employed.

There are advantages and disadvantages to the use of this data series. For the purposes of this study, the advantages clearly outweigh the disadvantages since this is the only data series in which employment figures are available at the LMA level in the detail needed to evaluate effectively the strengths and weaknesses of the LMAs' economies. The disadvantages of this data series are all related to the

fact that the purpose of the data collection is not for research, but for documentation of the unemployment compensation program. The series' limitations include the following: 1) persons on payrolls of more than one establishment are counted by each employer; 2) some employers having fewer than 50 workers in secondary branches in different geographic areas or industries combine these employees with their primary reporting unit; and, 3) from time to time employers' reports (or portions of them) are reclassified into different LMAs or sectors if DES supervisory personnel determine that reclassifications would represent current employment conditions more accurately.

In using the Massachusetts ES-202 data for this study, the Committee carefully reviewed the data series for changes which might indicate employer reclassifications and not actual changes in employment. (There is no documentation accompanying the figures to indicate to a researcher when such reclassifications occurred.) It reviewed the data for years in which sharp changes occurred. The causes of the changes were verified with DES, and appropriate adjustments were made.

DEFINITIONS AND ABBREVIATIONS

Bureau of Labor Statistics (BLS) - A division of the U.S. Department of Commerce. The BLS is the principle U.S. agency collecting and compiling employment and unemployment data and statistics.

Division of Employment Security (DES) - An agency of Massachusetts state government within the Secretariat of Economic Affairs, funded by the BLS. The DES is the state agency responsible for collecting and compiling Massachusetts employment and unemployment data for transmittal to the BLS.

Employment Sectors and Categories - Employment data is grouped into classifications defined in the Standard Industrial Classification (SIC) Manual prepared by the federal Executive Office of Management and Budget. SIC classifications are identified by two-digit, three-digit, and four-digit codes. The Senate Committee on Ways and Means study references the two-digit classifications as "sectors" and the three-digit classifications as "categories." High technology, a group of 20 three-digit manufacturing classifications, is also referenced as a category.

Durable and Nondurable Manufacturing - The BLS groups manufacturing sectors into two subdivisions - durable and nondurable. (The SIC classifications do not make this distinction.) The sectors grouped as durable manufacturing are those in which the manufacturers' products are expected, under normal conditions, to last longer than three years; those grouped as nondurable manufacturers are those with products normally lasting less than three years. The time criterion is not a rigid one. For example, manufacturers of fur coats are included among nondurable manufacturers.

DURABLE MANUFACTURING SECTORS

SIC Number	Description
24, 25	Lumber and wood products and furniture
32	Stone, clay, glass, and concrete products
33	Primary metal industries
34	Fabricated metal products, except machinery and transportation equipment
35	Machinery, except electrical
36	Electrical and electronic machinery, equipment and supplies
37	Transportation equipment
38	Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks
39	Miscellaneous manufacturing industries

NONDURABLE MANUFACTURING SECTORS

SIC Number	Description
20	Food and kindred products
22	Textile mill products
23	Apparel and other finished products
26	Paper and allied products
27	Printing, publishing, and allied industries
28	Chemicals and allied products
30	Rubber and miscellaneous plastics products
31	Leather and leather products

Finance Sector - The finance sector is comprised of banks, credit agencies (e.g. savings and loan associations and credit unions), holding and other investment companies, brokers and dealers in securities and commodity contracts, insurance companies (carriers and agents), and real estate firms (including developers). In the Senate Committee on Ways and Means study, banks (commercial and savings) and credit agencies are combined as banking, and insur- carriers and agents are combined as insurance. Real estate is separately reported; the balance is referenced as other.

High Technology - High technology employment is not an SIC two-digit employment sector, but because of the interest in this type of

manufacturing in recent years various researchers have attempted to establish a high technology definition. Varying approaches have been taken by different states and independent researchers. The definition used in the Senate Committee on Ways and Means study is the one developed by DES in the late 1970's. The Massachusetts high technology definition comprises 20 SIC three-digit classifications. The criterion used for the designation of a three-digit classification as high technology was the technical sophistication of the manufactured products.

PART 1

MAJOR ECONOMIC GROWTH SECTORS

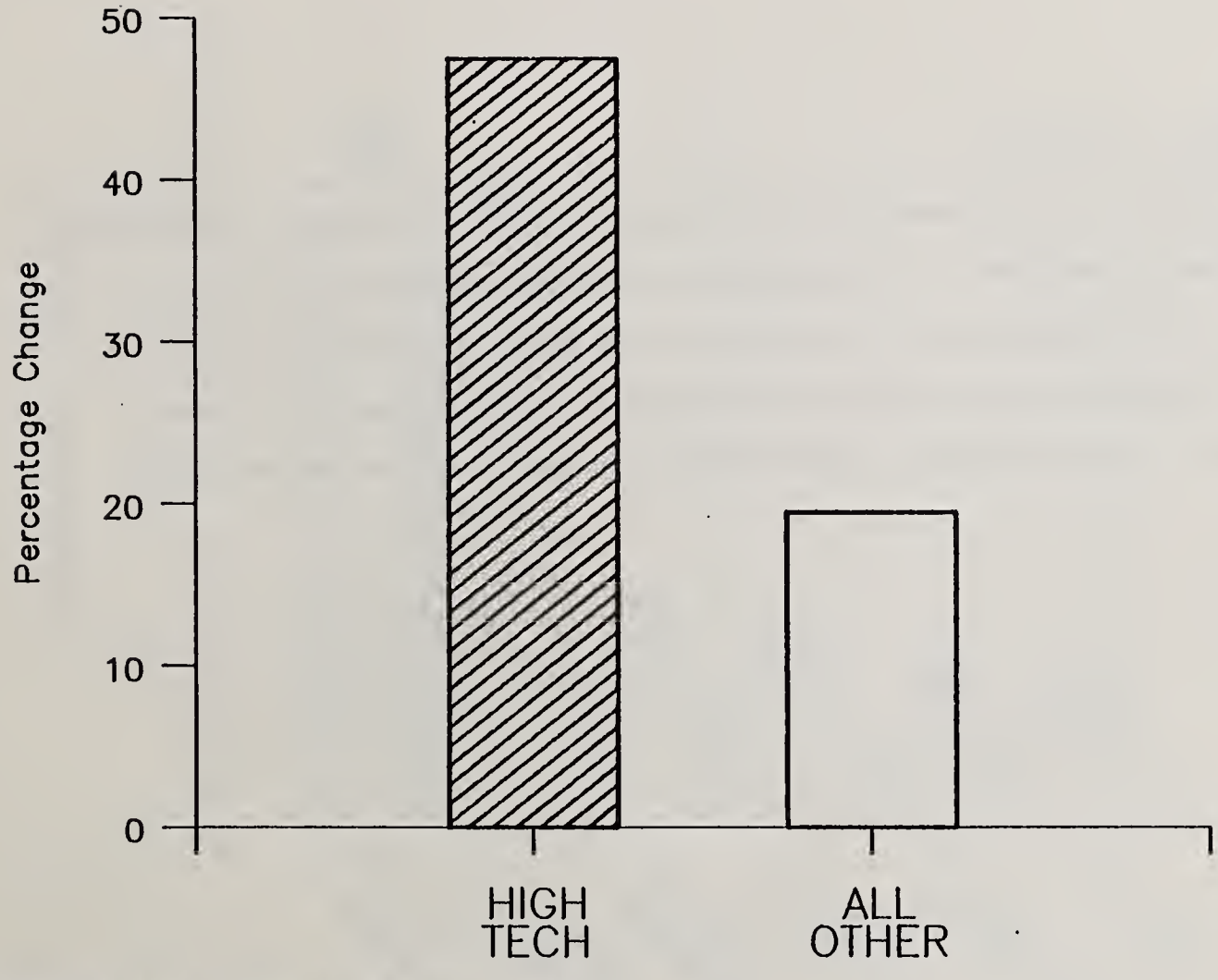
High Technology - Growth

When the percentage change in high technology jobs is compared with that in all other employment sectors during the 1975-1983 period, high technology's job growth was almost two-and-one-half times greater, 47.4 percent compared with 19.4 percent.

The difference between the percentages of change in high technology jobs and all other manufacturing is even greater: while the high technology portion of manufacturing had a 47.4 percent growth in employment, durable manufacturing[1] (excluding high technology) declined 5.1 percent, and nondurable manufacturing declined 6.7 percent.

1. The only nondurable manufacturing category grouped with high technology is the manufacture of drugs, which in 1983 represented only 1.1 percent of high technology's total employment.

PRIVATE EMPLOYMENT GROWTH 1975–1983
HIGH TECH VS. ALL OTHER
MASSACHUSETTS

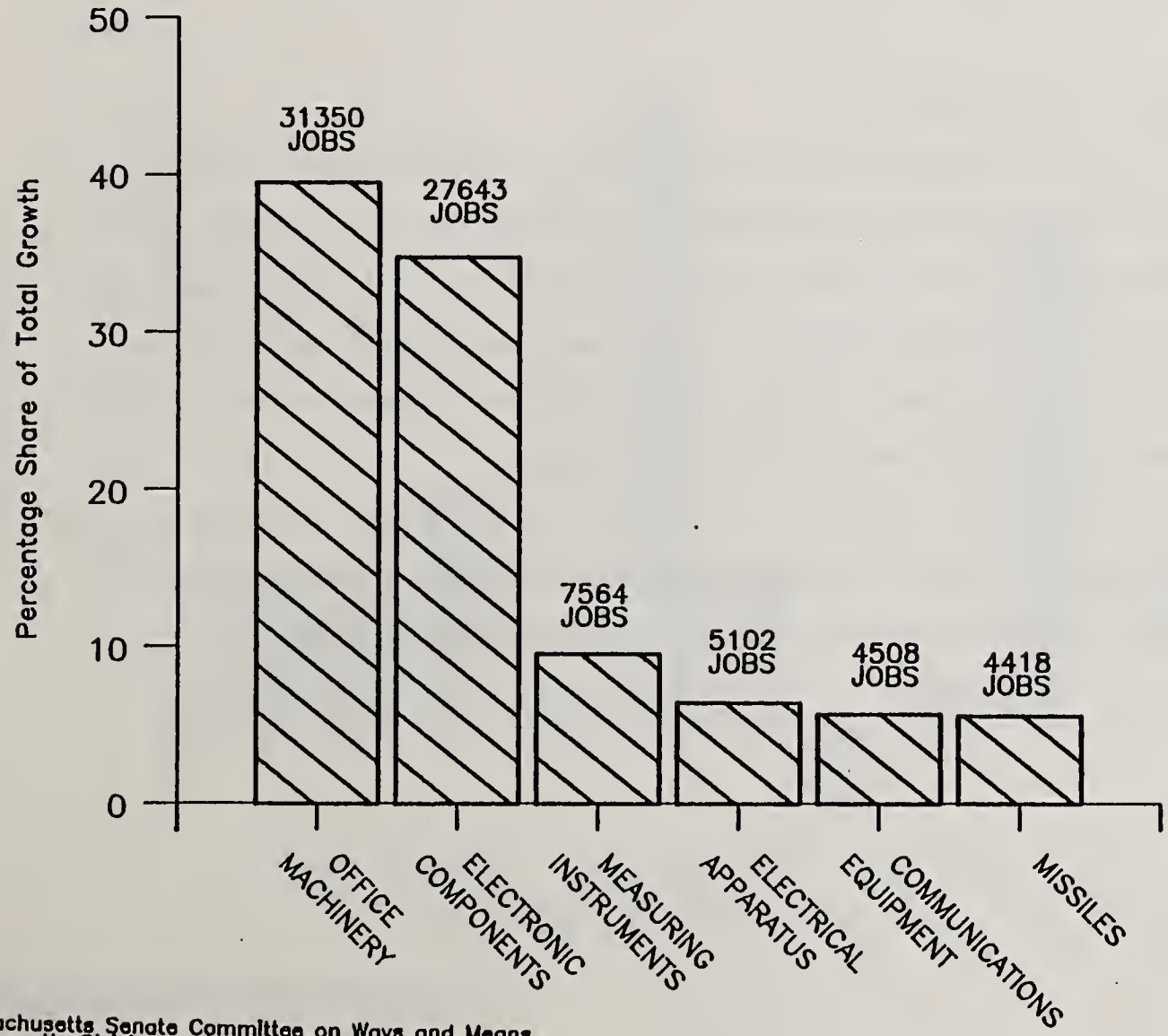


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

High Technology - Components

DES has identified 20 SIC manufacturing categories as high technology. Two categories of high technology employment -- the manufacture of office machinery and of electronic components -- contributed almost three-fourths of high technology's total new jobs. The production of guided missiles, space vehicles and parts -- the category most directly related to U.S. defense spending -- had the fewest new jobs of the six fastest growing categories.

COMPONENTS OF HIGH TECH EMPLOYMENT GROWTH 1975–1983
MASSACHUSETTS



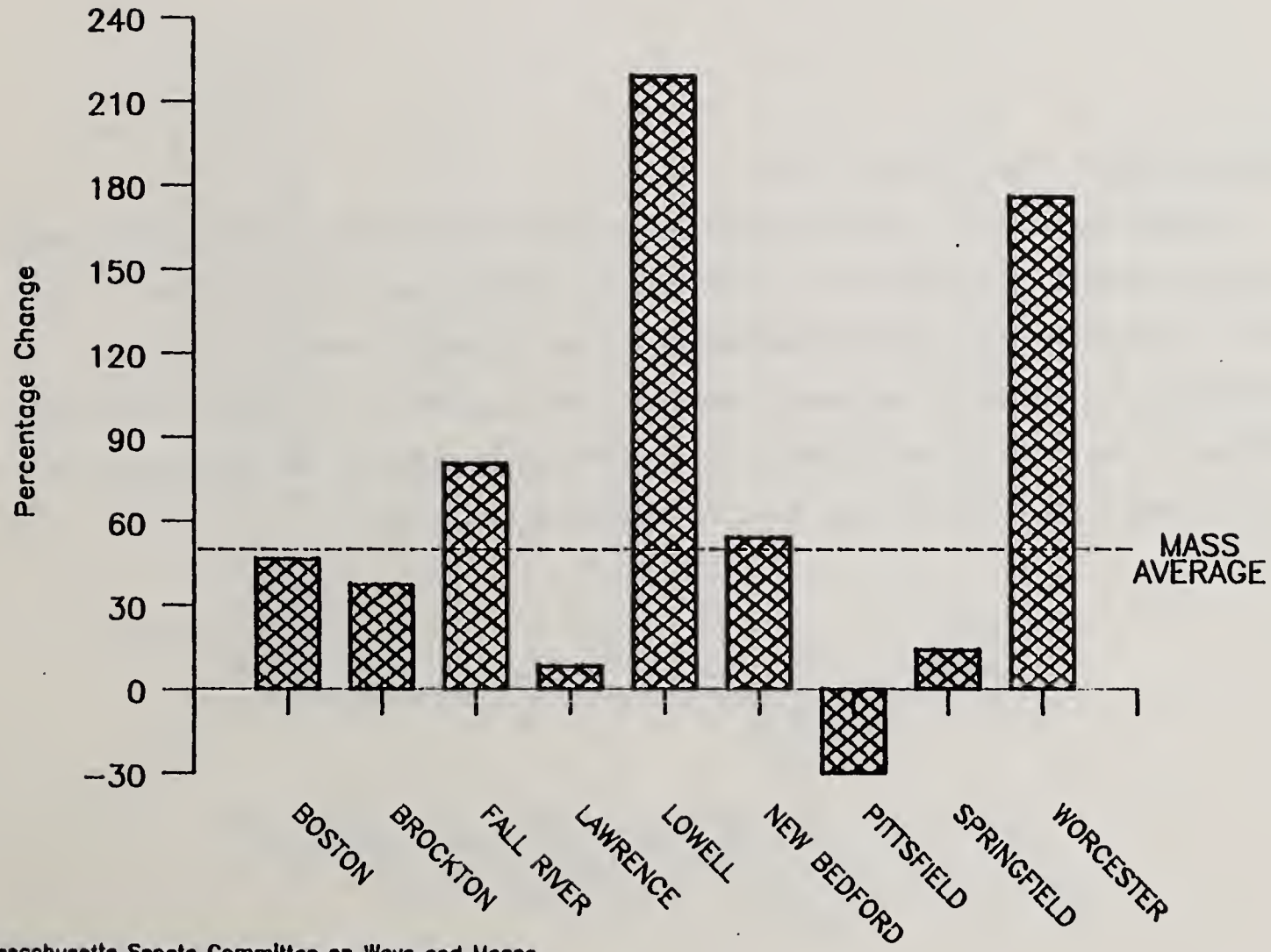
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division Of Employment Security

High Technology - Change by LMA

The Fall River and New Bedford LMAs had percentage increases in high technology jobs during the 1975-1983 period which exceeded the state average, but the increases in the number of high technology jobs in these LMAs were actually relatively small: the Fall River LMA's high technology employment increased by approximately 650 jobs and the New Bedford LMA's by 1500. The above-average growth percentages of these LMAs reflect their relatively few high technology employees in the base year.

The lack of uniformity in the growth rate of high technology jobs throughout the state is underscored by the fact that during the years of state average growth in high technology employment, the Pittsfield LMA lost jobs -- approximately 30.0 percent.

CHANGE IN HIGH TECH EMPLOYMENT 1975–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE

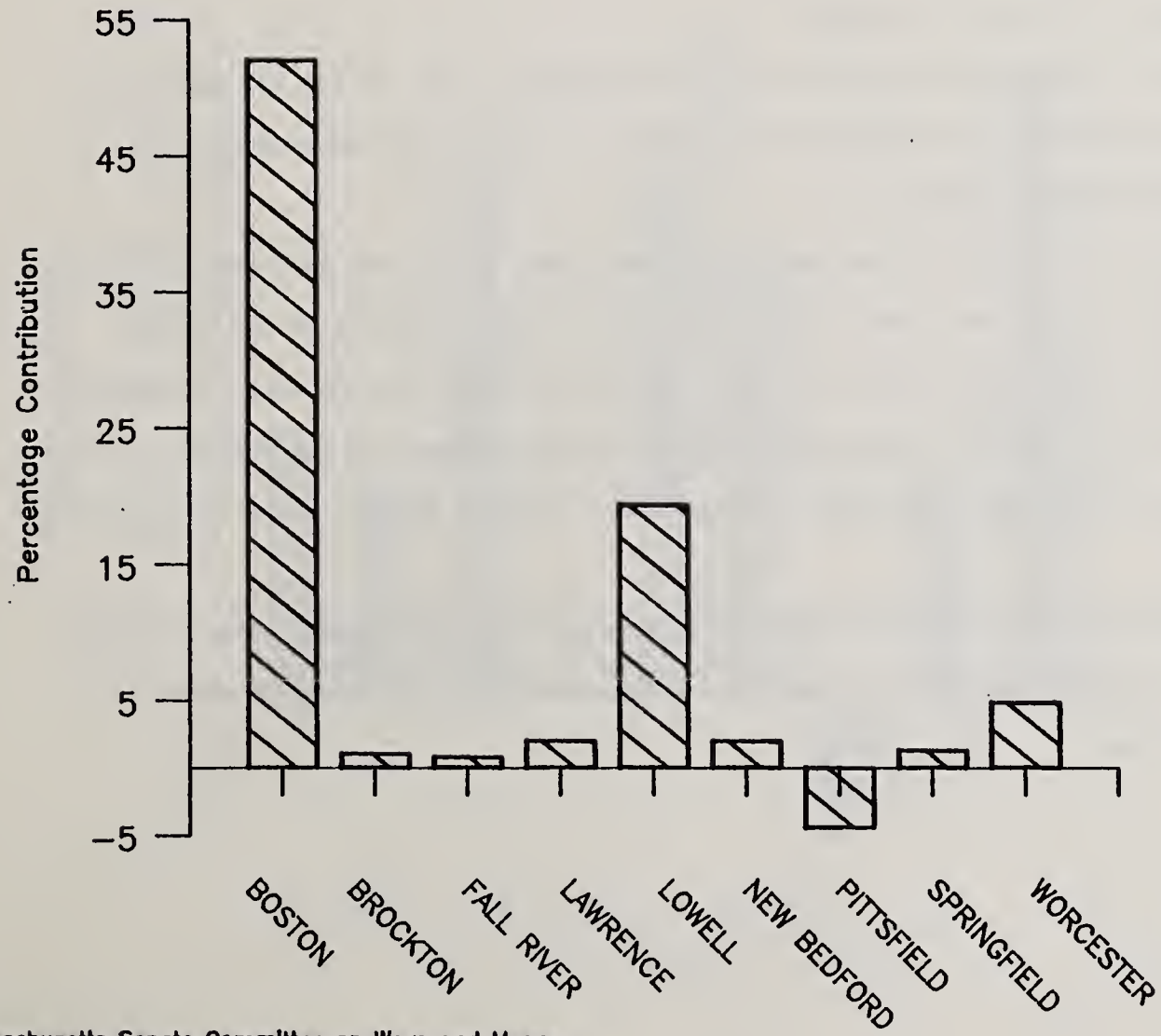


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

High Technology - Contribution by LMA

Although the state's economy has clearly benefited from the rapid growth of high technology employment, the growth rate has not occurred equally among all of the state's LMAs. In fact, growth in high technology employment has been highly concentrated. During 1975-1983, 71.4 percent of the state's new high technology jobs were located in the Boston and Lowell LMAs. The Worcester LMA had the third greatest number of new high technology jobs, although substantially fewer than the Boston and Lowell LMAs.

CONTRIBUTION TO HIGH TECH EMPLOYMENT GROWTH 1975–1983



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

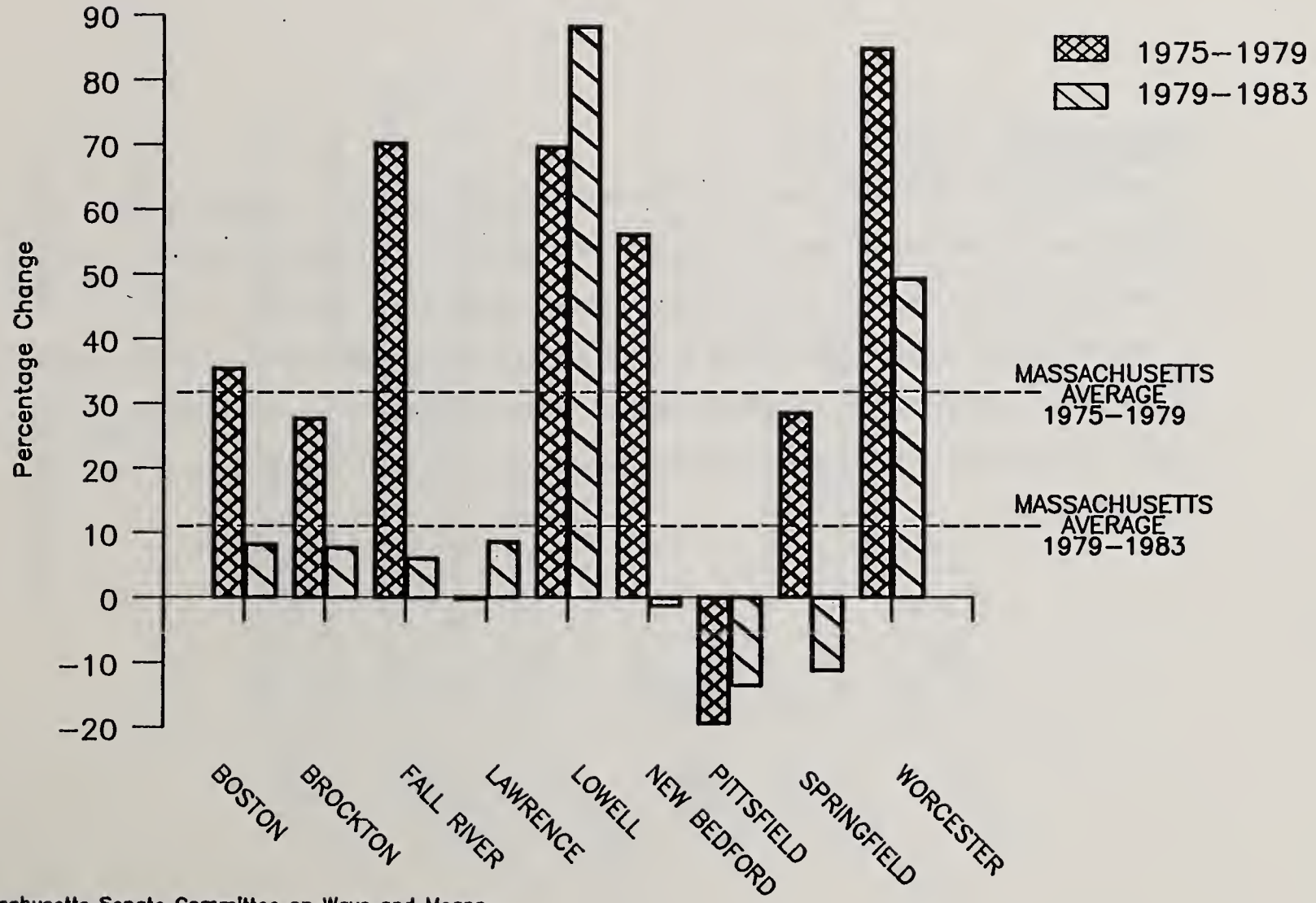
High Technology - 1975-1979, 1979-1983

Only the Lowell LMA had greater growth in high technology jobs during the second half of the 1975-1983 period than during the first half. The Lowell LMA had boom growth throughout the nine year timespan.

The slowdown in the state's high technology job growth during the 1979-1983 period is even more marked if the Lowell LMA is excluded. During the first half of the period (1975-1979) high technology growth in the rest of the state was 30.8 percent, but during the second half (1979-1983) growth in the rest of the state slowed to 6.9 percent. The Lowell LMA's high technology employment increased 69.4 percent 1975-1979 and 87.9 percent 1979-1983.

The Worcester LMA had high technology job growth during both halves of the 1975-1983 period. Its percentage increases in high technology employment exceeded the state averages of both periods.

HIGH TECH EMPLOYMENT GROWTH
1975–1979 VS. 1979–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



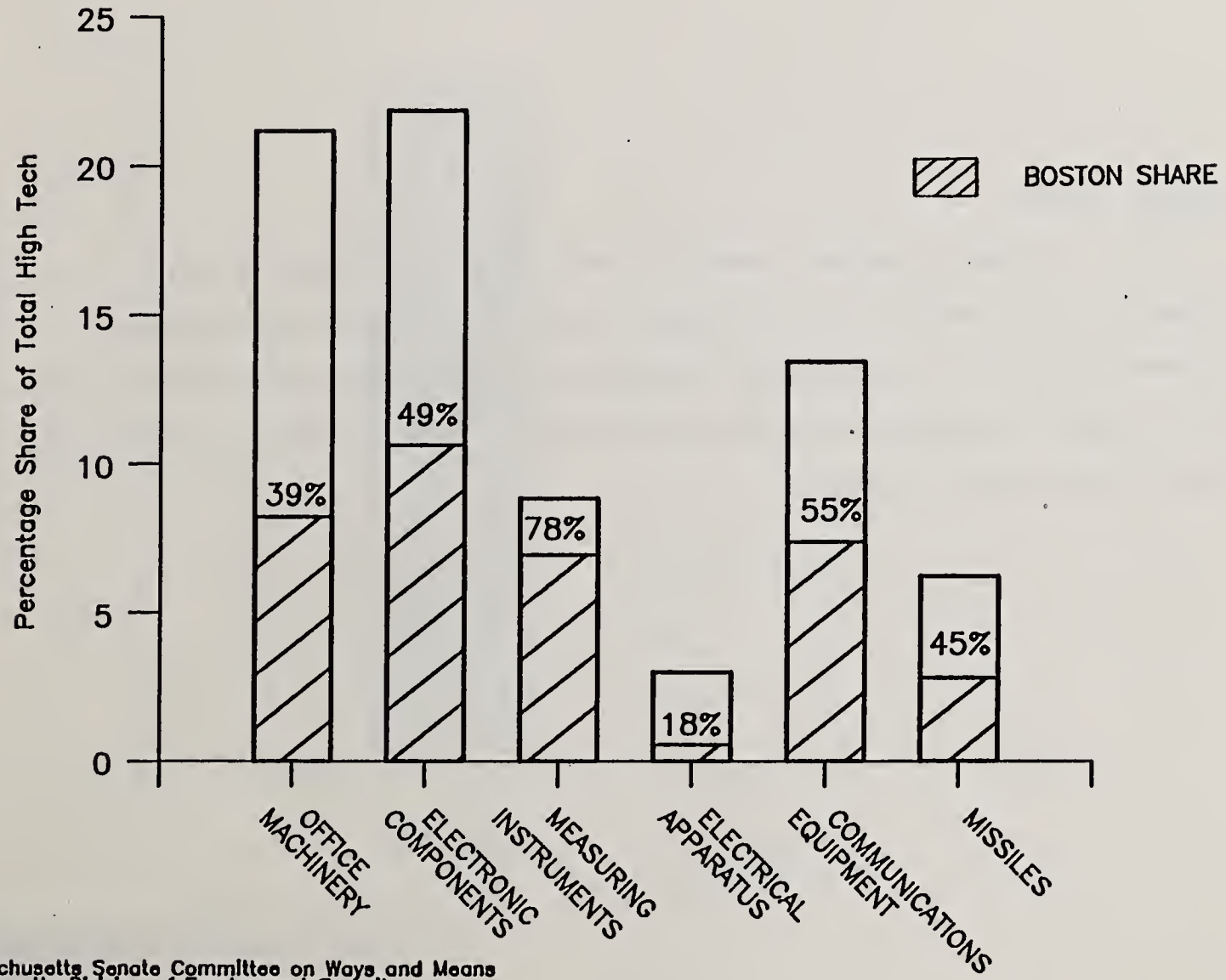
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

High Technology - Boston's Share

Employment in the manufacture of office machinery and electronic components each comprise over 20 percent of the state's total high technology employment; Boston's shares of these categories are 39.0 and 49 percent percent of the state's total.

The Boston LMA's high share of the state's high technology employment is particularly notable in two categories -- the manufacture of measuring instruments, where it has 78.4 percent of the state's total and in the manufacture of communications equipment, where it has 54.9 percent.

COMPOSITION OF MASSACHUSETTS HIGH TECH EMPLOMENT – 1983
BOSTON'S SHARE OF EACH CATEGORY



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Services - Growth

There is a dramatic contrast between the growth in the state's service sector employment and the combined percentage change in all other sectors of Massachusetts employment (agriculture, construction, manufacturing, finance, transportation, and trade). Jobs in services increased three times faster than all other job categories combined, 46.0 percent compared with 14.2 percent.

PRIVATE EMPLOYMENT GROWTH 1975–1983

SERVICE VS. ALL OTHER
MASSACHUSETTS

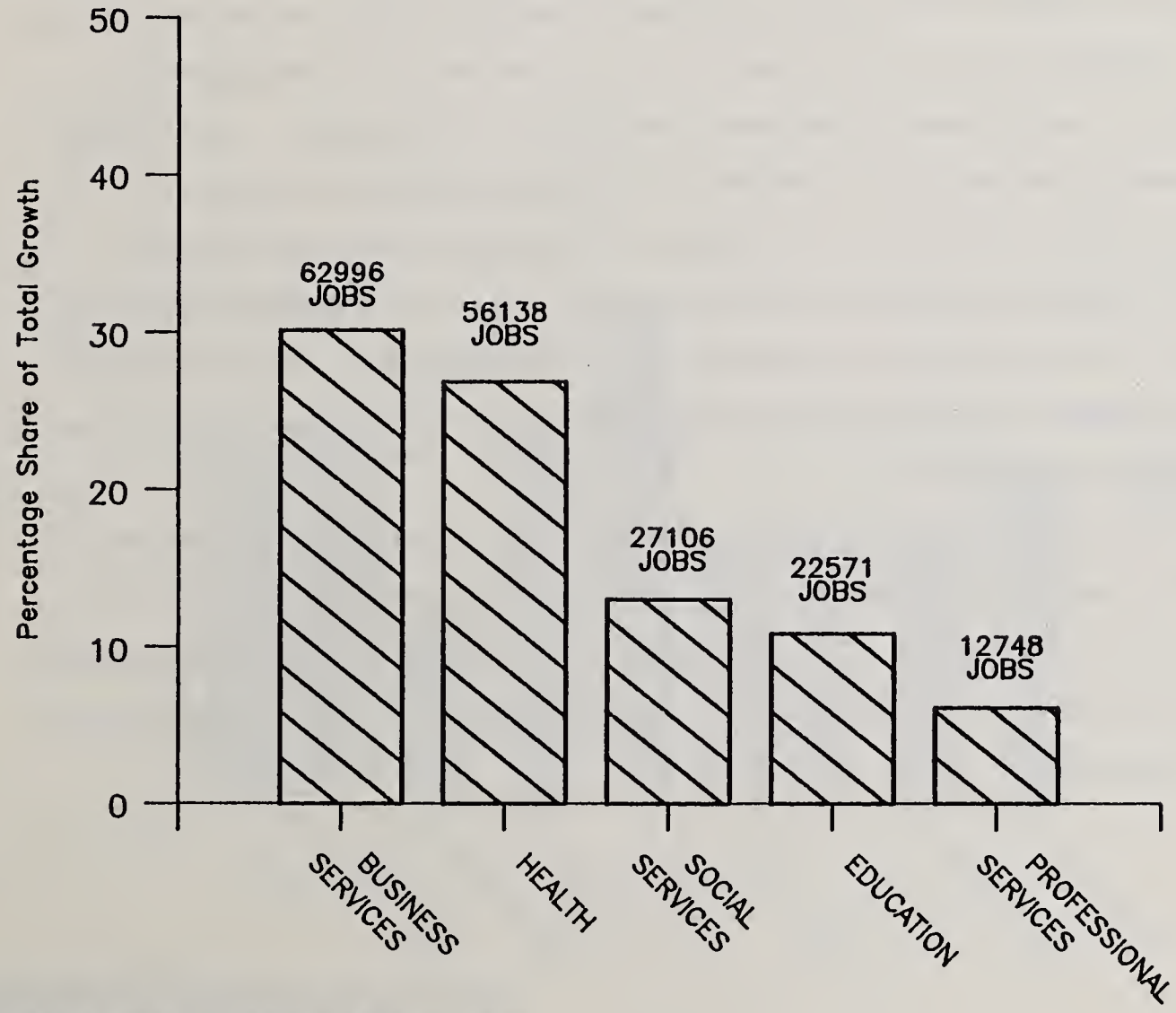
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Services - Components

In 1983 there were more persons employed in occupations classified as services (664,230) than in any other job category. Service jobs encompass a wide variety of occupations. The major categories, and their shares of the state's total service jobs, are as follows: health (34.0 percent), business services (19.4 percent), education (12.3 percent), social services (6.7 percent), and professional services (6.5 percent).

In terms of the number of jobs contributed to the growth of service employment, business services ranked first with 30.1 percent of all new service jobs 1975-1983, and health services was second with 26.8 percent. Social services and education ranked third and fourth in service job growth with 13.0 percent and 10.8 percent increases.

COMPONENTS OF SERVICE EMPLOYMENT GROWTH 1975–1983
MASSACHUSETTS



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

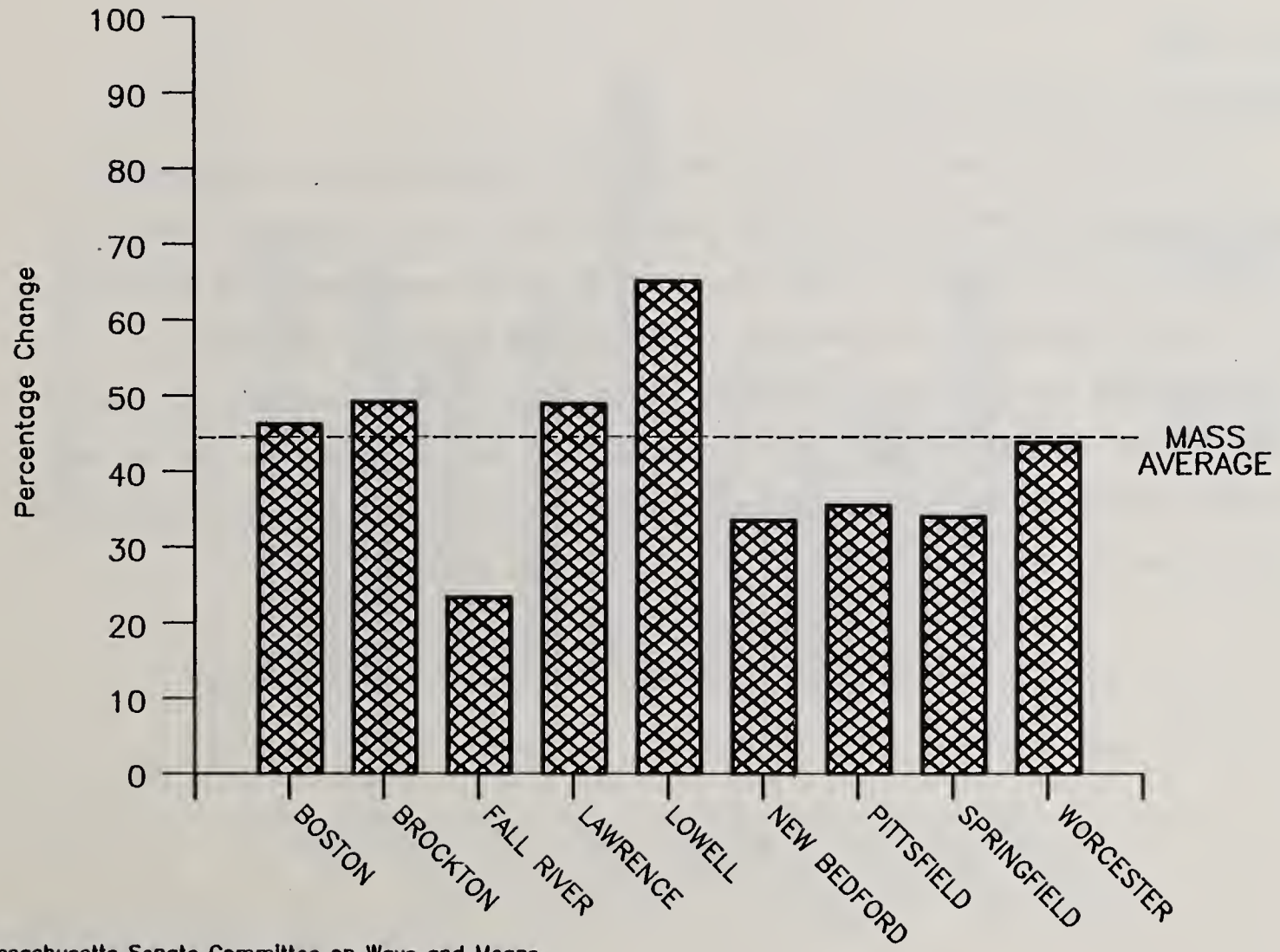
Services - Change by LMA

Although the number of service jobs increased between 1975-1983 by an impressive 46.0 percent -- compared with a total increase in all other private sector employment of 14.2 percent -- not all areas of the state shared equally in the growth. The Fall River LMA, for example, had service job increases of only one-half the state average.

The most notable increase in service jobs was in the Lowell LMA, where service employment increased one and one-half times the state average, 64.9 percent compared with 46.0 percent. The area's growth in business service employment grew 350 percent. This sharp growth suggests that there might be a spinoff stimulation of business service jobs from expanding high technology.

Contradictory evidence occurred in the Pittsfield and Springfield-Chicopee-Holyoke LMAs which had below-average changes in high technology employment, (a loss of 30.4 percent for Pittsfield and a gain of only 13.9 percent for Springfield), but at the same time both LMAs had exceptional growth in business service employment -- 137.7 percent and 64.5 percent respectively.

CHANGE IN SERVICE EMPLOYMENT 1975–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



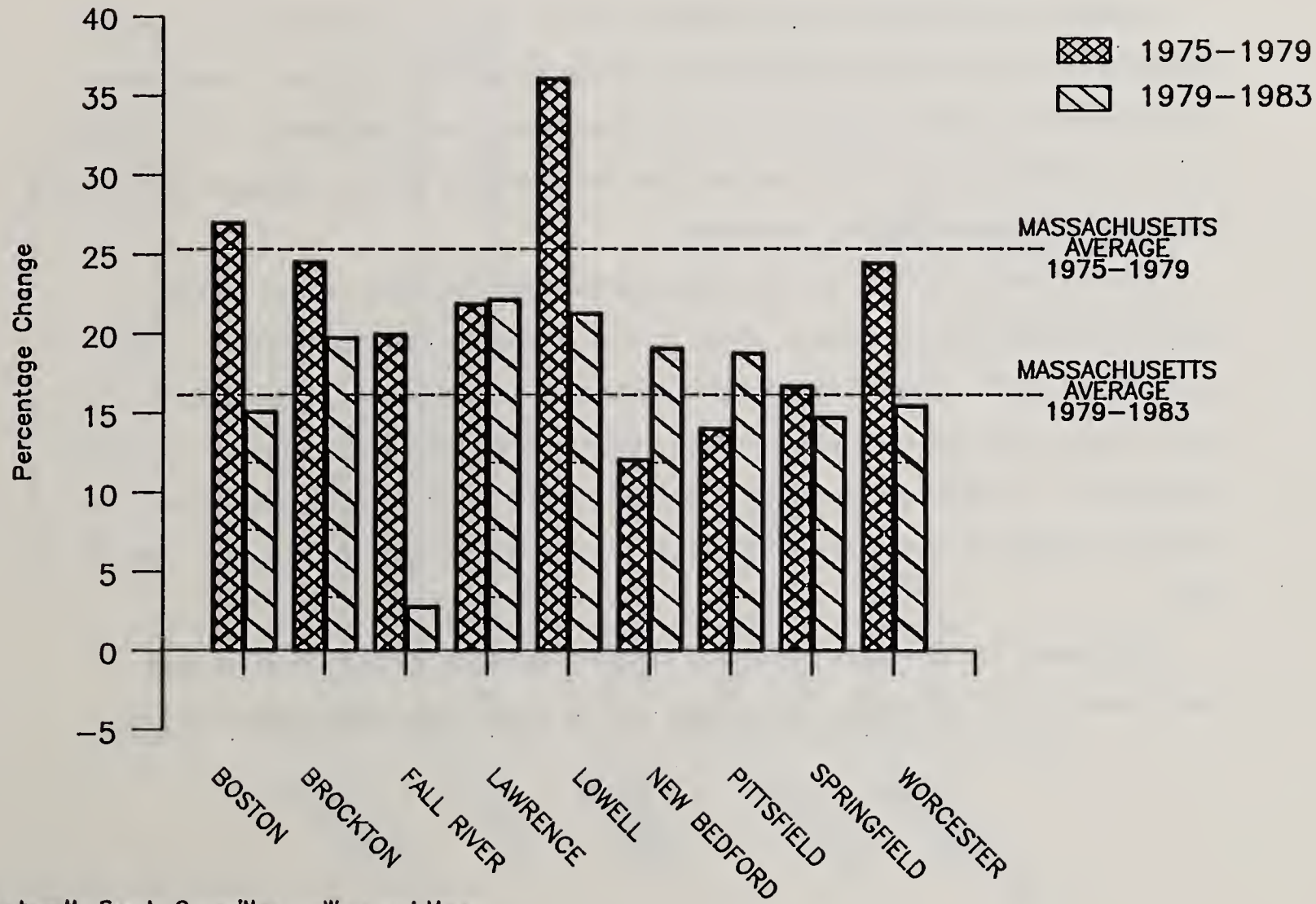
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Services - 1975-1979, 1979-1983

Although service job growth can be credited with cushioning the state from overall employment declines during the 1981-1983 recessions, the rate of service job increase during the last half of the 1975-1983 period was distinctly lower than in the first half, 16.1 percent compared with 25.8 percent, but it was more equal among the LMAs.

During the last four years, 1979-1983, five of the nine LMAs had service job growth that exceeded the state average, while during the first four years only two LMAs had above average growth. The Fall River area was the notable exception with a service job increase of less than 3.0 percent 1979-1983.

SERVICE EMPLOYMENT GROWTH
1975–1979 VS. 1979–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

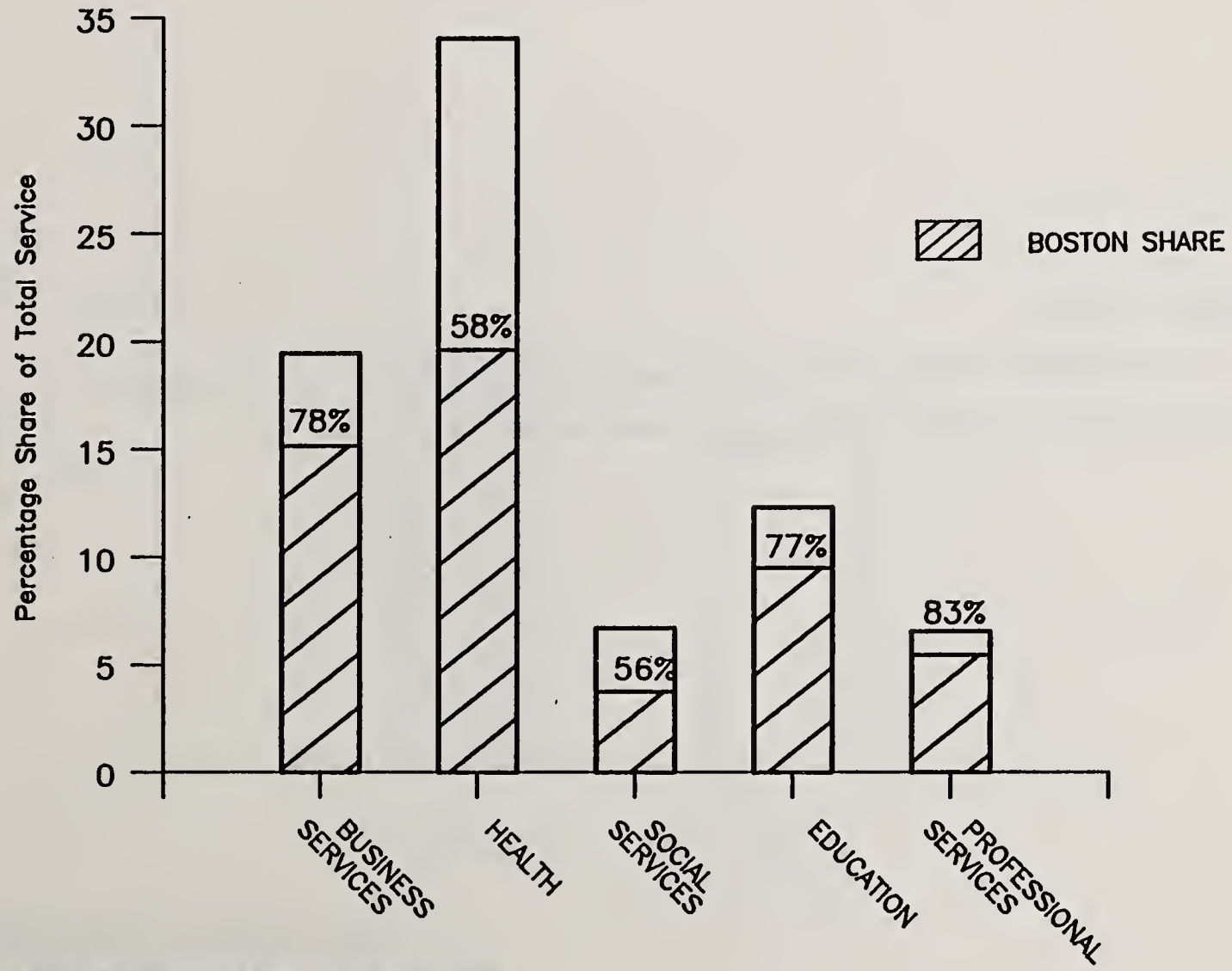
Services - Boston's Share

Business service jobs are approximately 20.0 percent of the state's total service employment; 78.0 percent of these jobs are in the Boston LMA. This LMA's dominance of total business service employment promises exceptional future job growth since this category contributed the most (30.1 percent), to the growth of service employment during the most recent five year period, 1979-1983.

Jobs in health services are more than one-third of the state's total service employment, and Boston's share of these is 57.5 percent of the state's total. This exceeds the area's share of the state's population, 48.1 percent. In the state's other major LMAs, health jobs are equal with or slightly below each area's share of the state's population. The disproportionality of Boston's health service employment reflects the extent to which the Boston area's hospitals serve a broader geographic region than the LMA.

The Boston area dominates employment in the other major categories of service employment as well, including 83.3 percent of the state's professional service jobs.

COMPOSITION OF MASSACHUSETTS SERVICE EMPLOMENT – 1983
BOSTON'S SHARE OF EACH CATEGORY

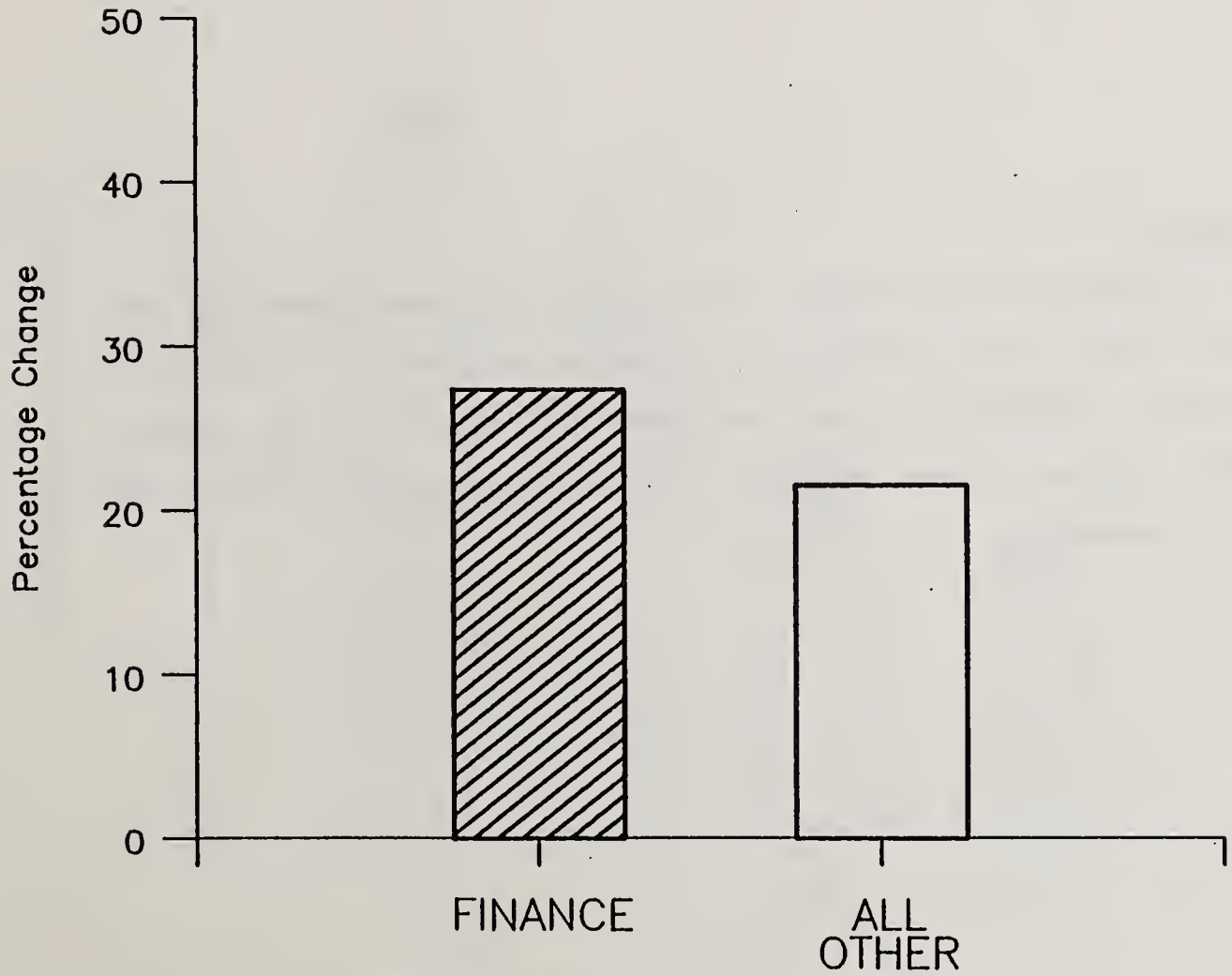


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Finance - Growth

From 1975-1983 finance sector jobs increased at a greater rate than the aggregate of all other employment sectors, 27.3 percent compared with 21.5 percent.

PRIVATE EMPLOYMENT GROWTH 1975–1983
FINANCE VS. ALL OTHER
MASSACHUSETTS

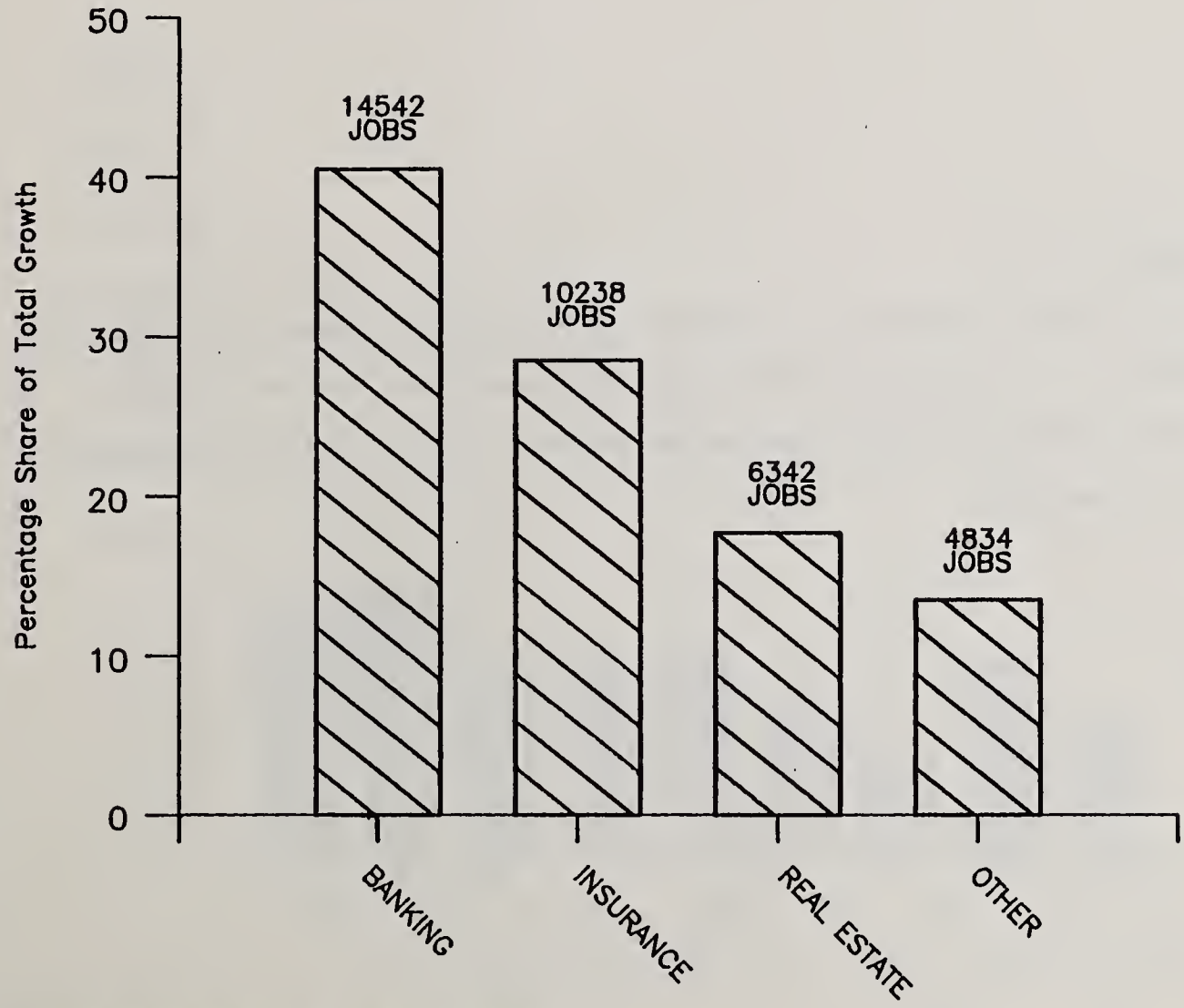


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Finance - Components

Within the finance sector the category with the fastest employment growth has been banking (which includes savings and loan associations and credit unions). Despite the faster growth rate, in 1983 this category had somewhat fewer total jobs than insurance (which combines insurance carriers and agents) -- approximately 64,000 in banking compared with 66,400 in insurance.

COMPONENTS OF FINANCE EMPLOYMENT GROWTH 1975–1983
MASSACHUSETTS

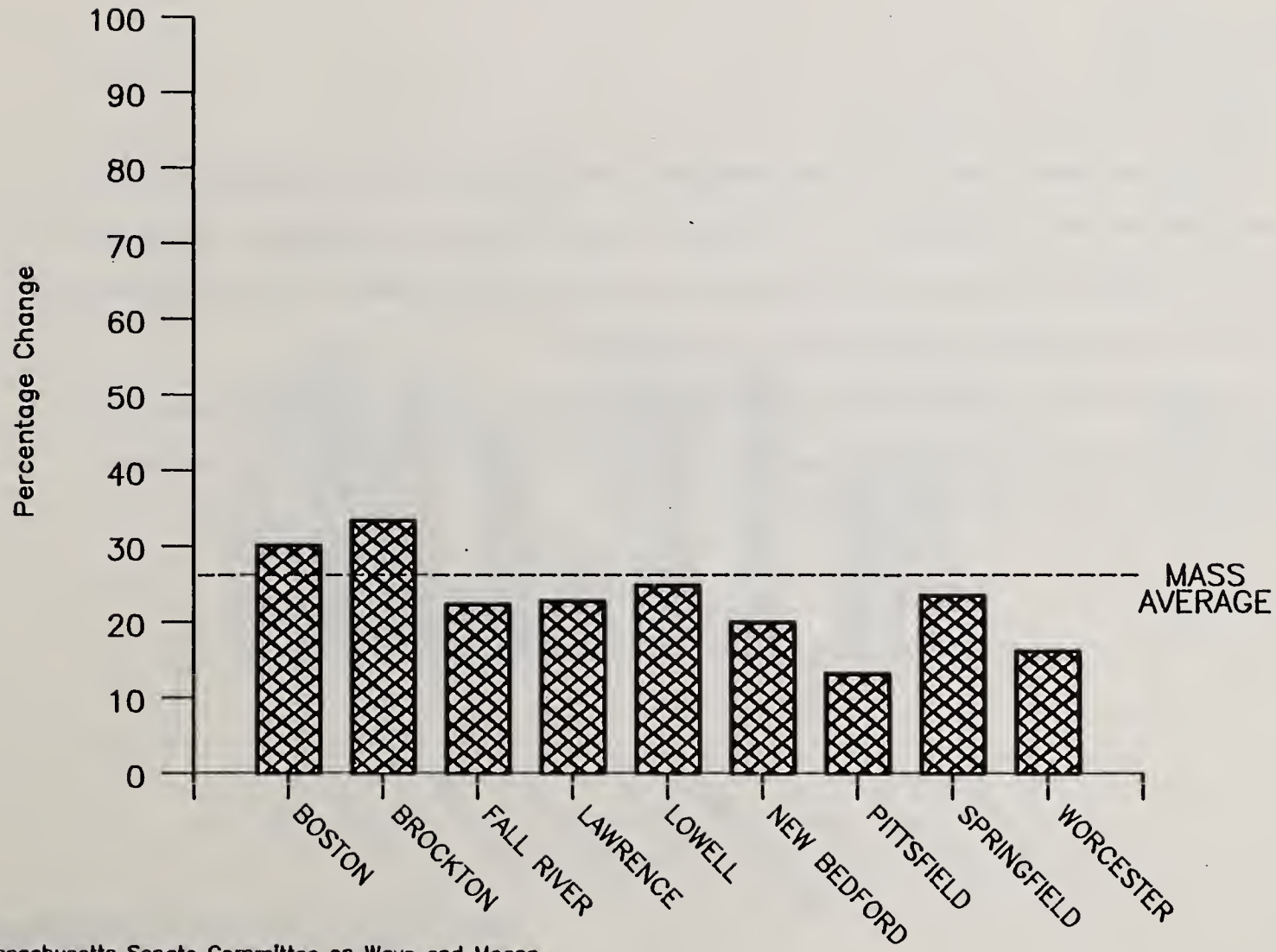


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division Of Employment Security

Finance - Change by LMA

Most of the state's major LMAs had relatively equal rates of increase in finance jobs during 1975-1983. The exception was Pittsfield, which grew at one-half the statewide average. The Brockton LMA's growth rate was the greatest, 33.3 percent, due principally to increases in bank jobs.

CHANGE IN FINANCE EMPLOYMENT 1975–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



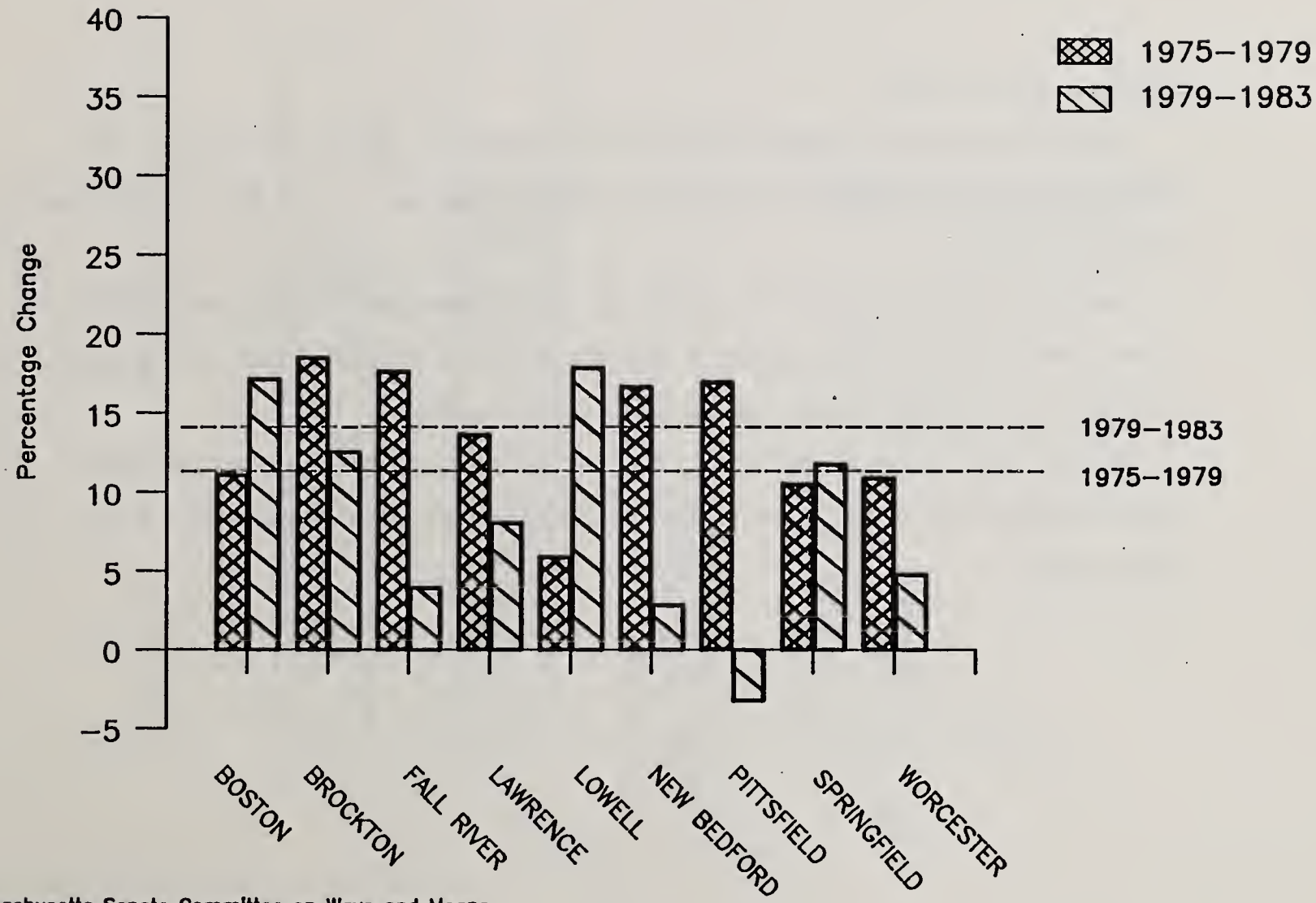
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Finance - 1975-1979, 1979-1983

When the growth rates in finance employment for the first and second halves of the 1975-1983 period are compared, the differences among the LMAs are apparent: six of the nine had steeper growth in the first four years than in the second, while the growth pattern for the remaining three was just the opposite.

Boston's faster growth during 1979-1983 caused the state average percentage growth to be higher than in 1975-1979 since such a large share of the state's finance employment, 70.1 percent, is located in this LMA.

FINANCE EMPLOYMENT GROWTH
1975–1979 VS. 1979–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

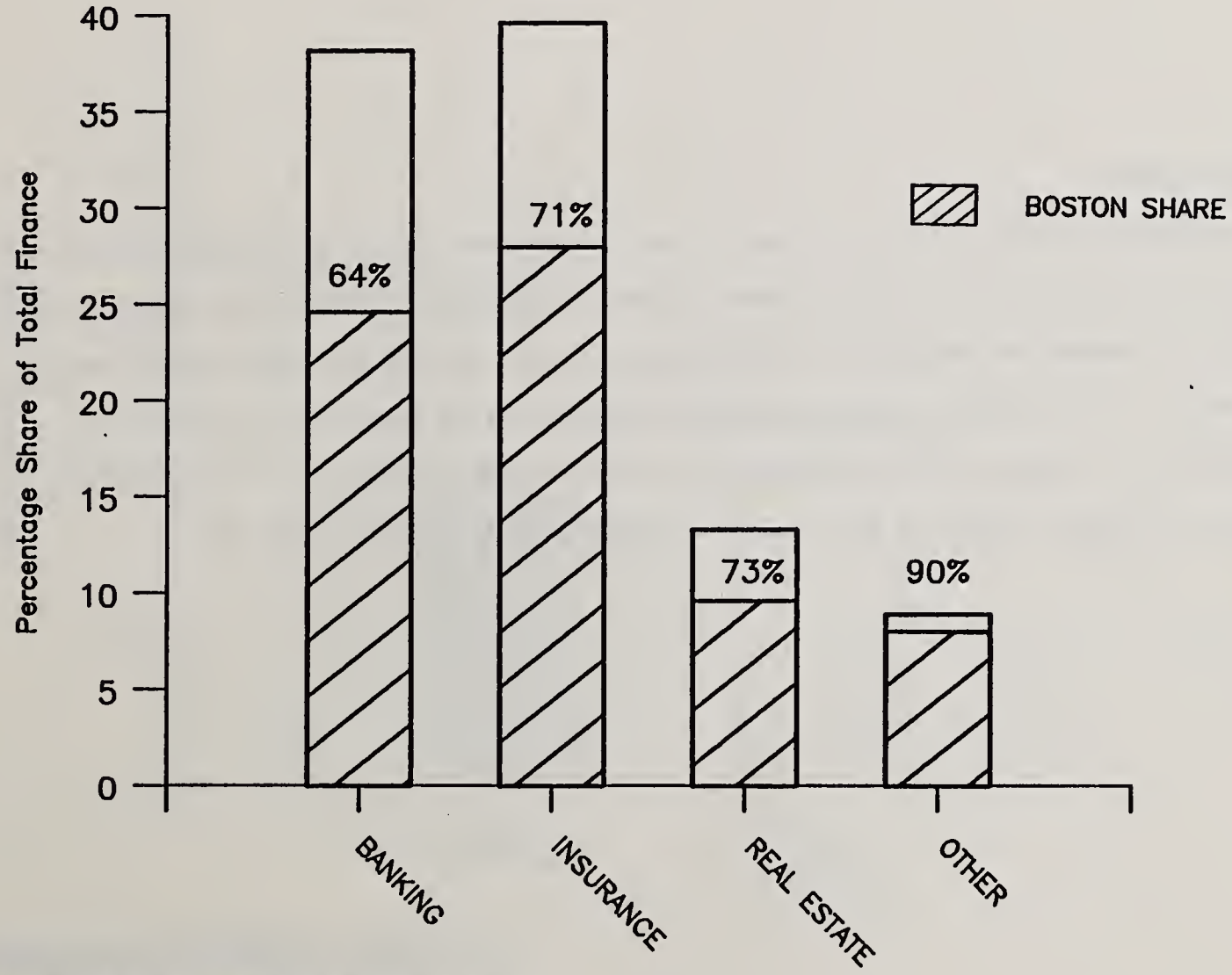
Finance - Boston's Share

Banking and insurance together comprise 77.7 percent of finance employment. The Boston LMA dominates statewide employment in these categories -- with 64.4 and 70.6 percent respectively.

The Boston LMA's dominance of the state's finance employment is even greater than that of the state's service jobs. Boston's population is 46.1 percent of the state's total; its share of the state's total finance jobs is 70.2 percent.

Besides large shares of the state's banking and insurance jobs, the Boston LMA has almost three-fourths of the state's total real estate jobs and nine-tenth of all other finance jobs.

COMPOSITION OF MASSACHUSETTS FINANCE EMPLOYMENT – 1983
BOSTON'S SHARE OF EACH CATEGORY

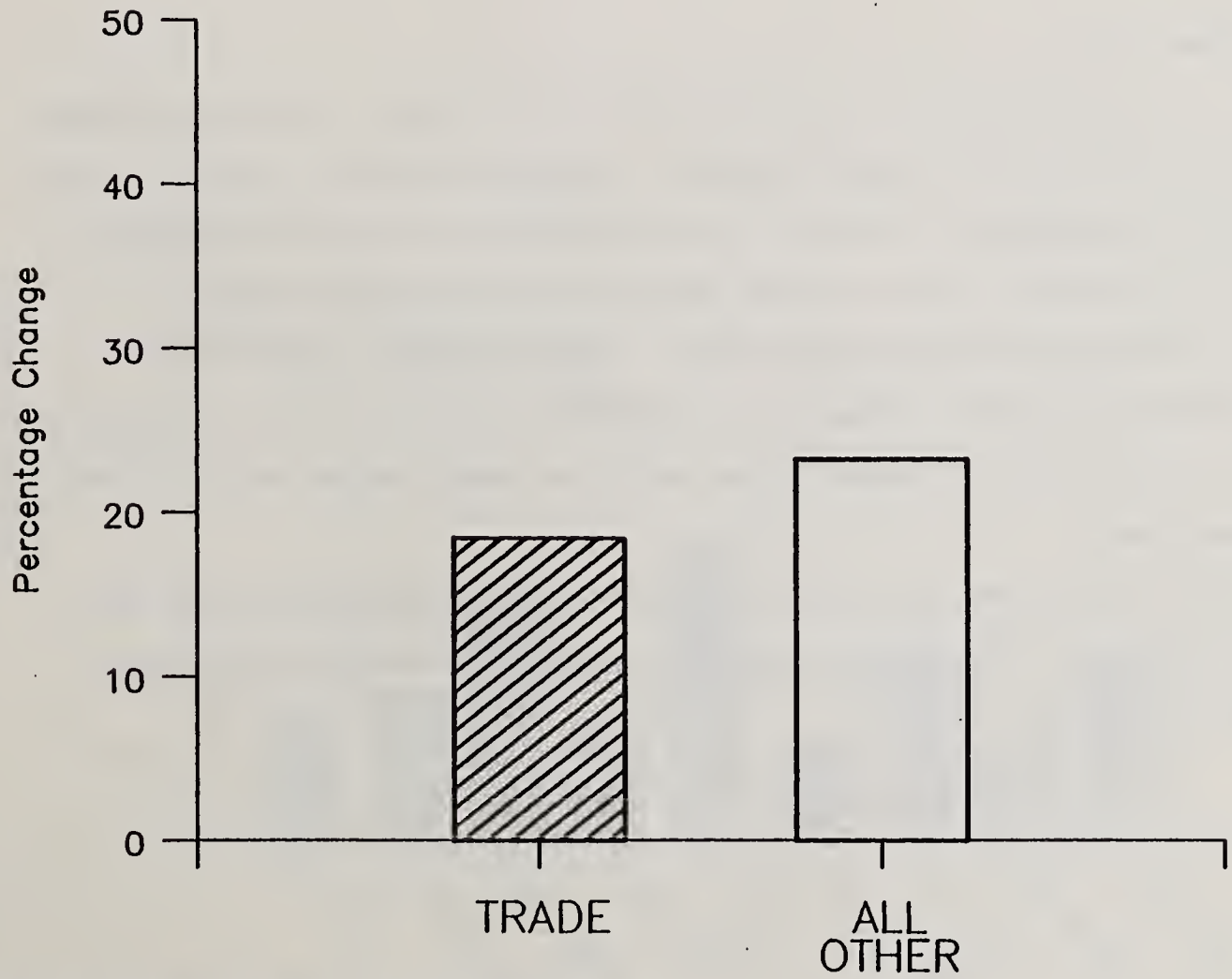


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Trade - Growth

In the period 1975-1983, the number of jobs in the trade sector increased by approximately 94,500, making this sector's growth second in magnitude to the service sector. New trade jobs represented one-fourth of Massachusetts' total private employment growth during the period. The percentage change in trade employment during these years was below the average for all other private employment (18.4 percent compared with 23.2 percent) simply because the number of jobs in this sector was already so large in the base year.

PRIVATE EMPLOYMENT GROWTH 1975–1983
TRADE VS. ALL OTHER
MASSACHUSETTS



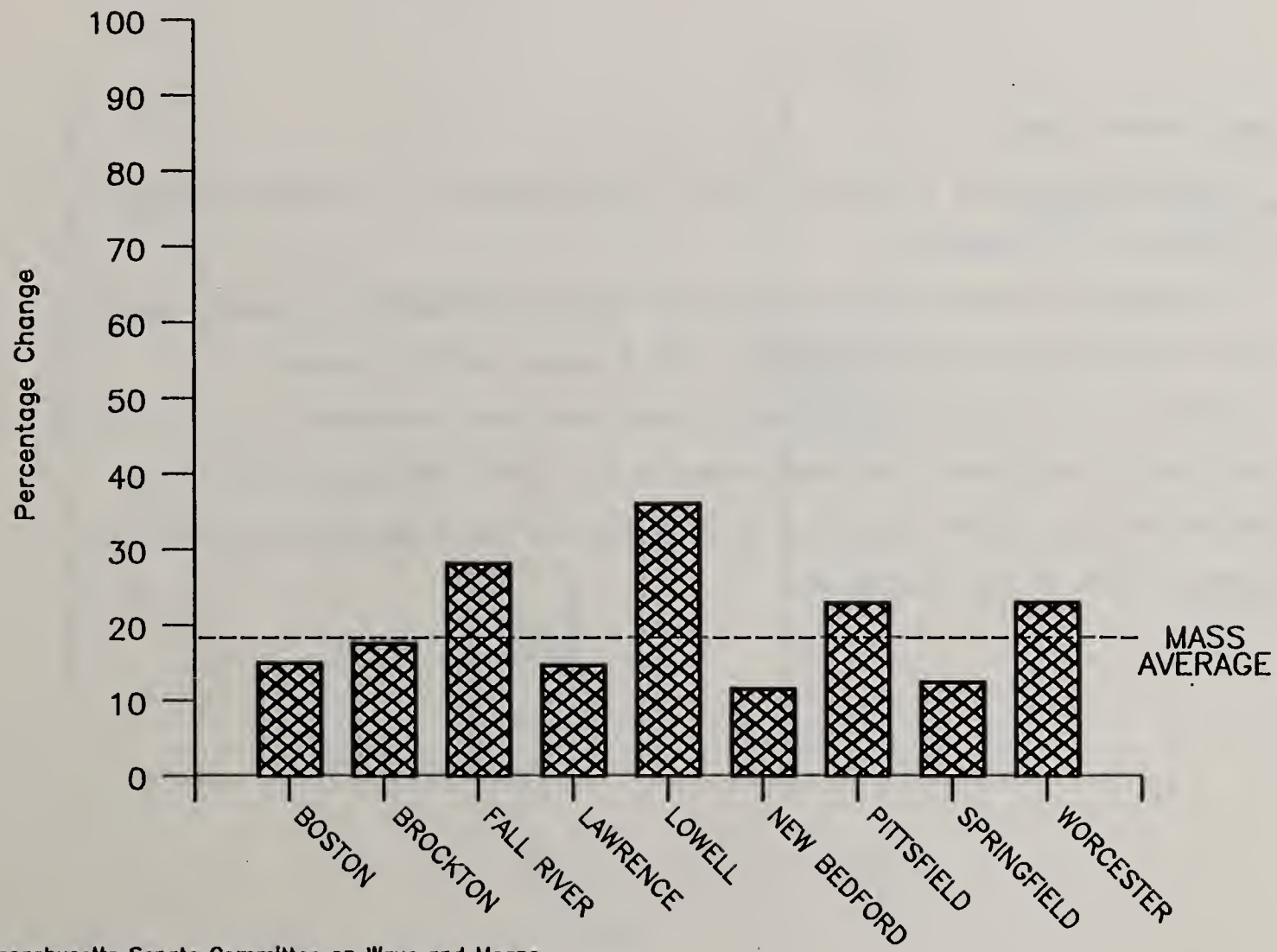
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Trade - Change by LMA

There is no easy explanation as to why the LMAs with the highest percentages of change in trade jobs experienced this economic benefit. The Lowell, Fall River, Pittsfield, and Worcester LMAs' percentages of increase in new trade jobs were all above the state-wide average for the 1975-1983 period, yet these LMAs had very different percentages of increase in total employment during these years. Among the state's major LMAs, the Lowell LMA's total employment increase was the highest in the state, while the Pittsfield, Fall River, and Worcester LMAs ranked (respectively) the lowest, second, and third lowest in employment growth.

Although the Boston LMA's percentage increase was below the statewide average, the area's actual number of new trade jobs was almost one-half the statewide total during these years, 46.4 percent.

CHANGE IN TRADE EMPLOYMENT 1975–1983
LABOR MARKET AREAS VS. MASSACHUSETTS AVERAGE



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

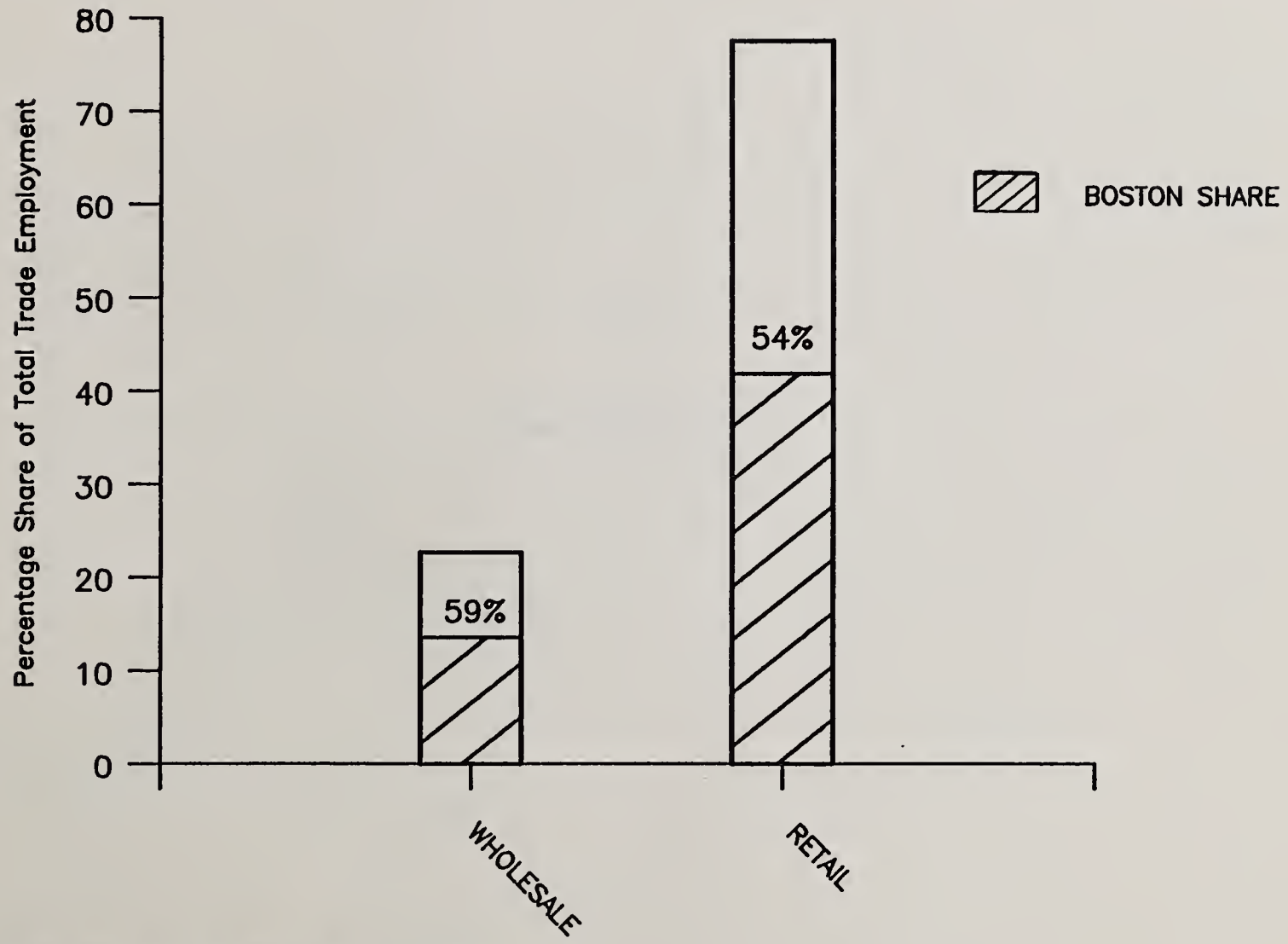
Trade - Boston's Share

Seventy-seven percent of the state's total trade employment is in retail business, 22.6 percent is in wholesale.

The Boston LMA's share of the state's total wholesale employment is somewhat greater than its share of total retail employment -- 59.8 percent and 54.1 percent.

Boston is the only major Massachusetts LMA in which trade employment is a larger share of the state's total than is the area's share of the state's total population. This disproportionality reflects the extent to which the area has trade business beyond the geographic limits of the area itself.

COMPOSITION OF MASSACHUSETTS TRADE EMPLOYMENT – 1983
BOSTON'S SHARE OF EACH CATEGORY



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

PART 2

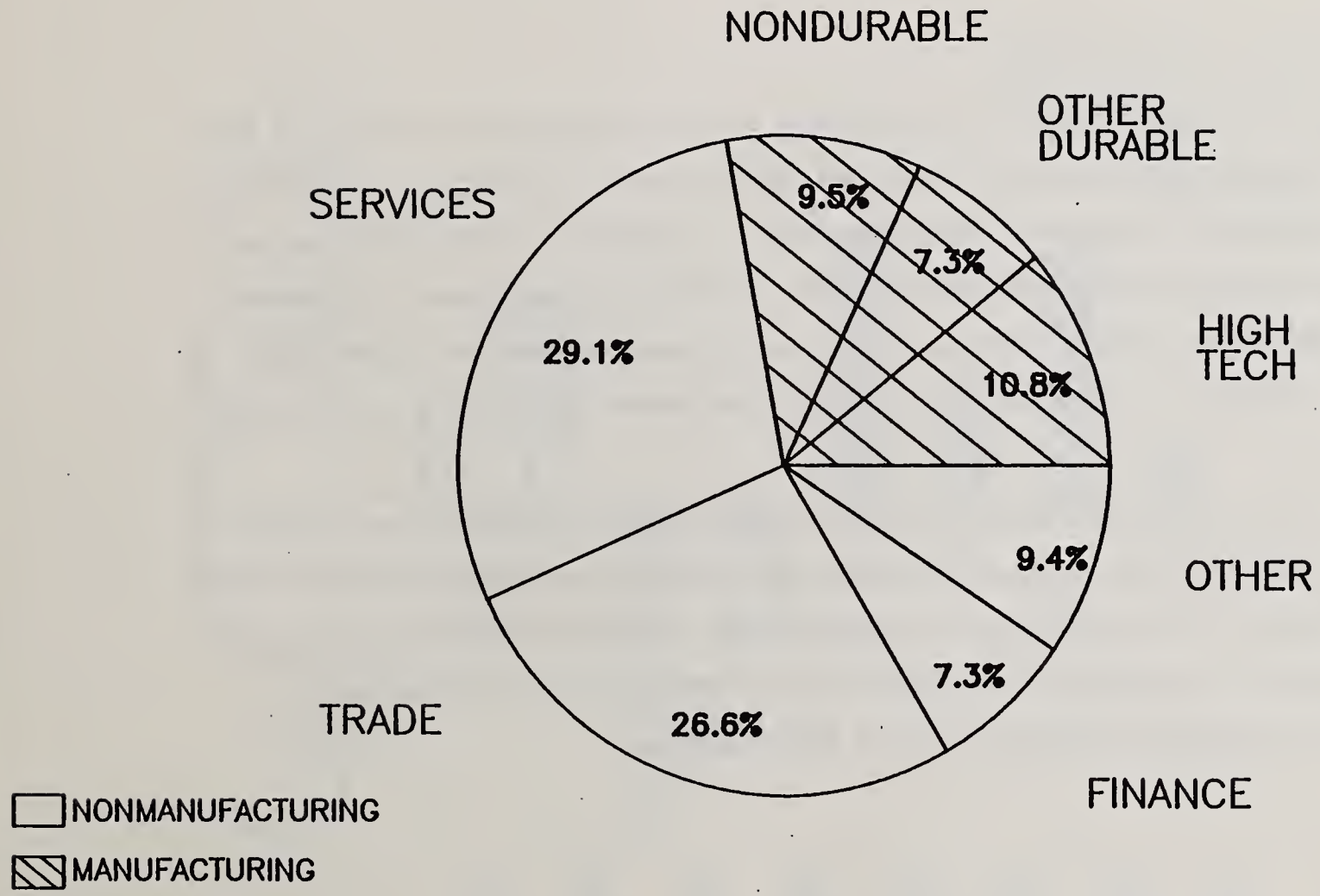
LABOR MARKET AREAS

Massachusetts - Composition

Total manufacturing employment is 27.6 percent of the state's total employment. Manufacturers are generally classified as manufacturers of durable and nondurable products. In this study, they are classfied as manufacturers of nondurable, high technology, and other durable products. (See Definitions and Abbreviations for the industries grouped in each classification.)

Total manufacturing, services, and trade are three similarly sized employment sectors. Together they comprise four-fifths of the state's total employment. Too small to be shown separately are the state's employment shares of agriculture -- 0.6 percent, construction -- 3.5 percent, and transportation, communications and public utilities -- 5.1 percent.

COMPOSITION OF EMPLOYMENT – 1983
Massachusetts



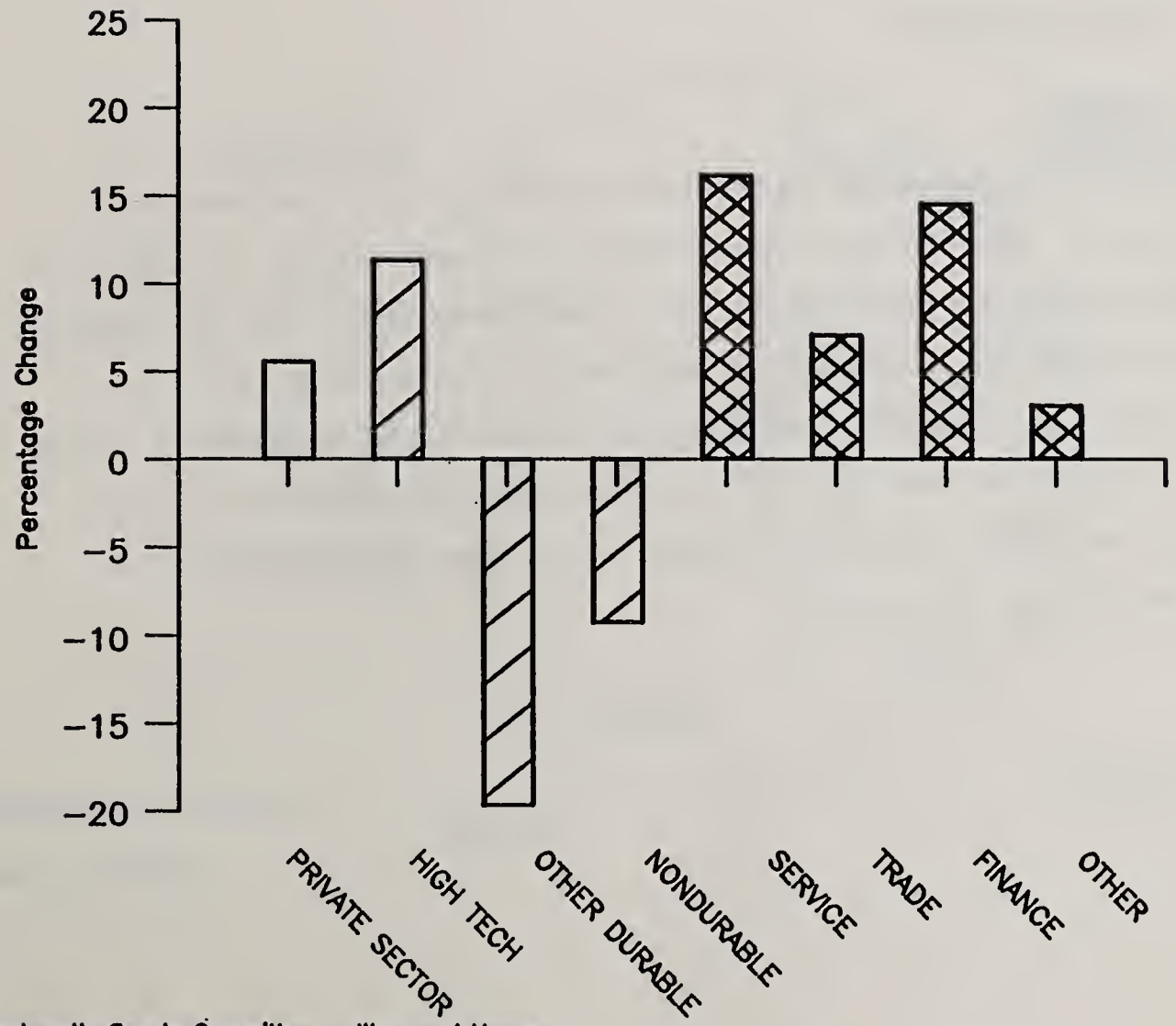
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Massachusetts - 1979-1983 Changes

During the period 1979-1983, four employment sectors had percentage increases in jobs that exceeded the state average for total employment growth (5.5 percent): services (16.1 percent), finance (14.5 percent), high technology (11.3 percent), and trade (7.0 percent). All other sectors, combined, experienced an overall decline in employment, (8.9 percent). Service jobs contributed 51.6 percent of all new jobs during this period, trade contributed 22.4 percent. Finance and high technology contributed 14.1 and 11.9 percent respectively.

The state's other nonmanufacturing sectors (agriculture, construction, and transportation, public utilities, and communications) had a combined job increase during 1979-1983 of 3.0 percent, but all manufacturing categories other than high technology had a combined job decrease of 14.4 percent. (See Definitions and Abbreviations for definitions of durable and nondurable manufacturing and of high technology.)

EMPLOYMENT CHANGE 1979–1983
Massachusetts



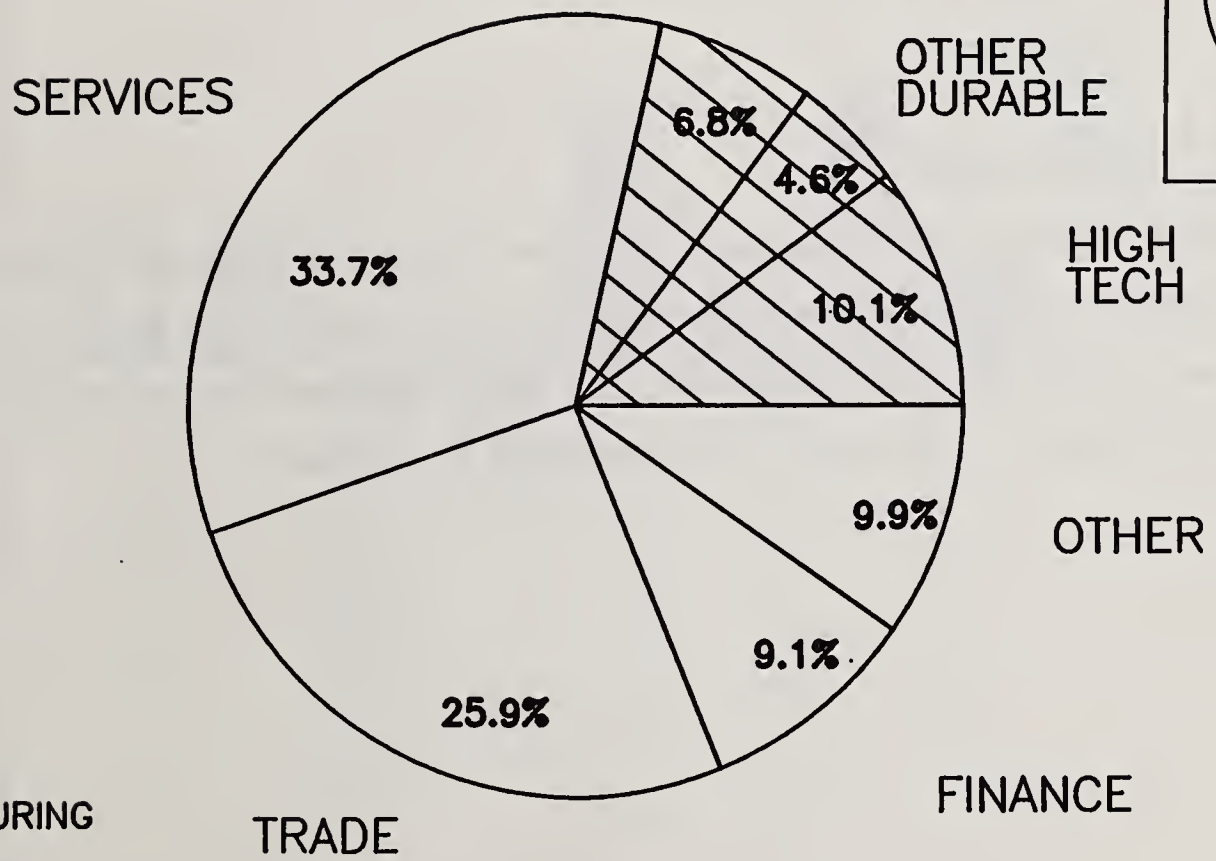
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

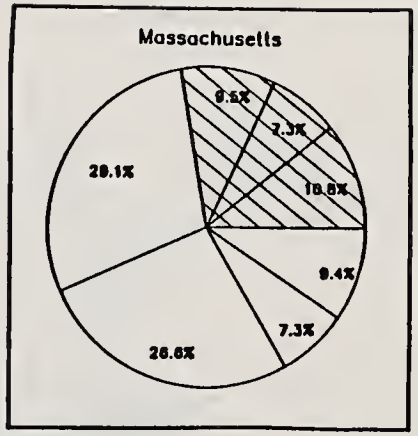
Boston - Composition

The Boston LMA's employment mix differs from the state average in that more of its jobs are in services and finance and somewhat fewer are in manufacturing. Its job mix is favorable for future growth since both the service and finance sectors have been expanding at above-average rates and the forecast is that they will continue to do so.

The fact that nearly one-half of the Boston LMA's manufacturing employment is in high technology industries also bodes well for the future. Far smaller portions are in non-durable manufacturing (which has been declining), and in other durable manufacturing (which has been growing, but slowly).

COMPOSITION OF EMPLOYMENT – 1983
Boston





NONMANUFACTURING

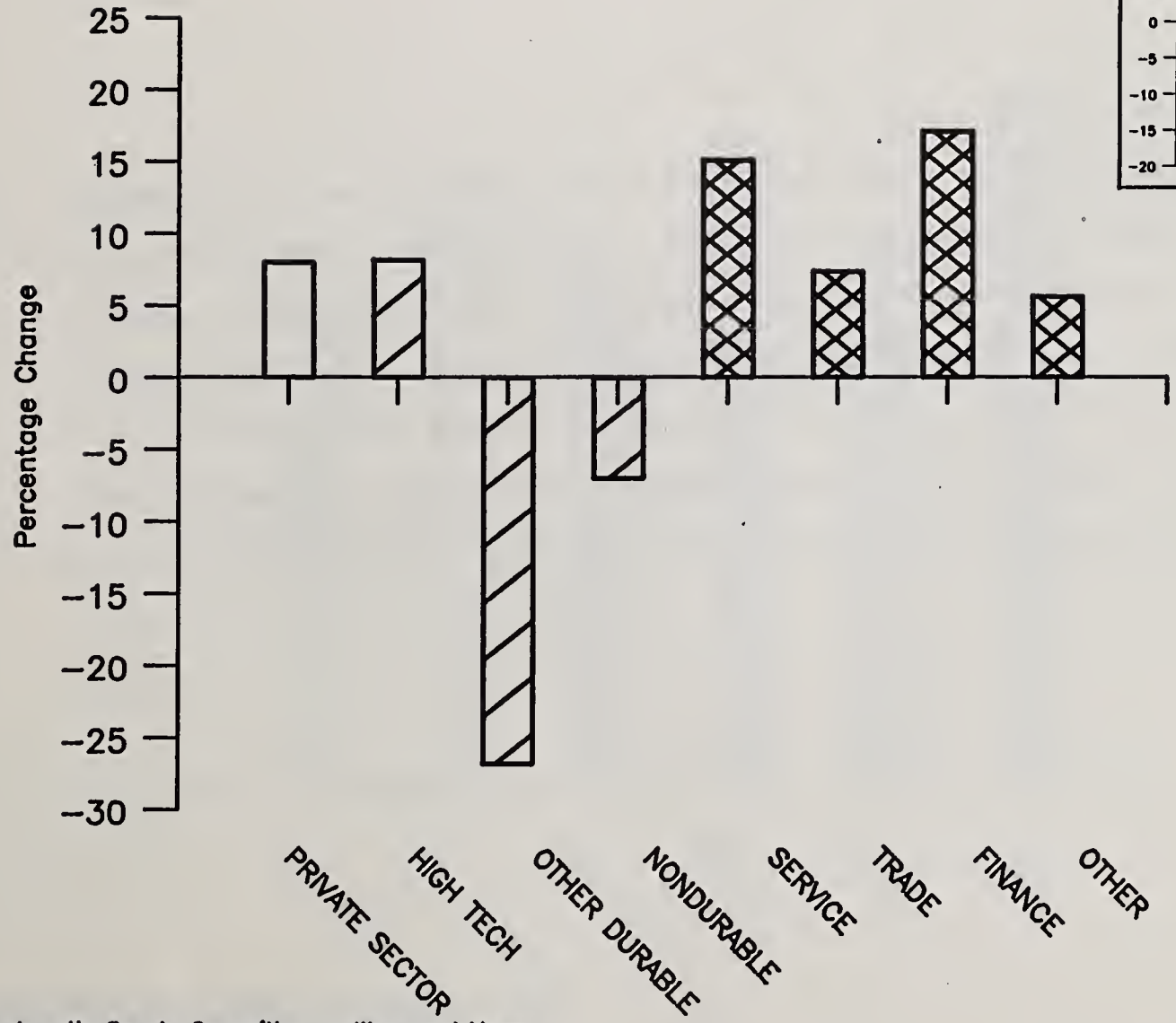
MANUFACTURING

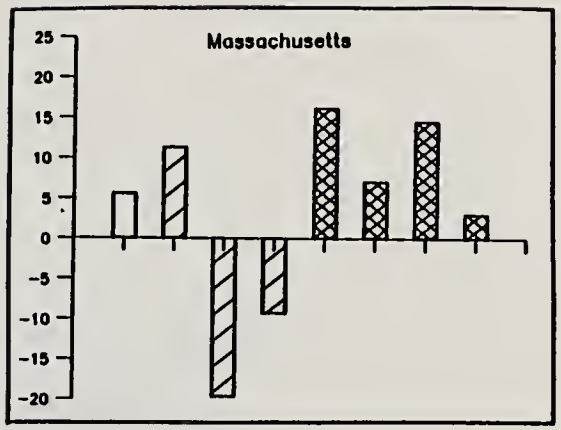
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Boston - 1979-1983 Changes

Although the Boston LMA's total employment grew faster than the state average during the 1979-1983 period, its pattern of employment growth and decline, by industrial sector, paralleled the state's without exception. This is not unexpected considering the Boston LMA's dominant share of the state's total employment in each sector.

EMPLOYMENT CHANGE 1979–1983
Boston



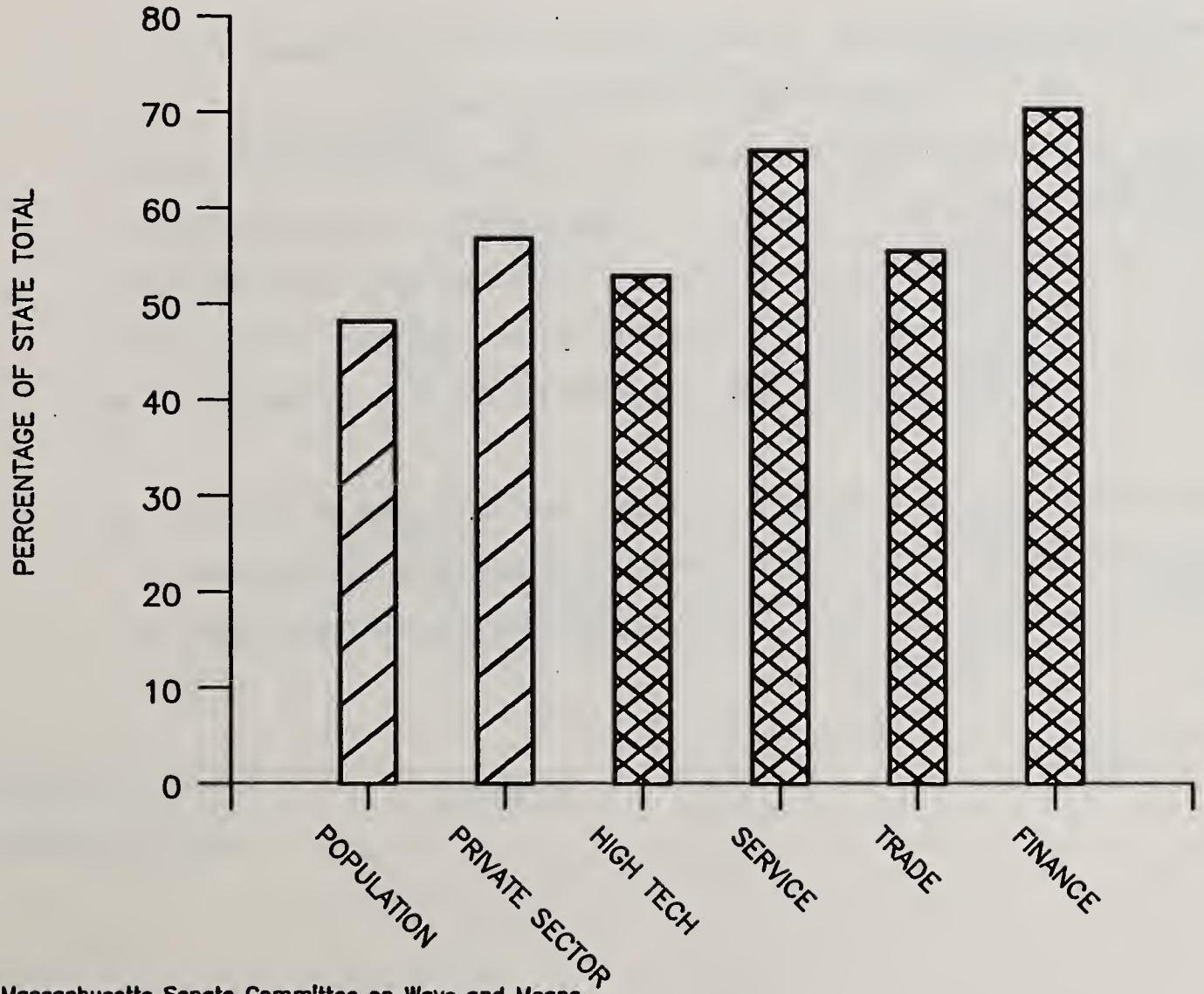


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Boston - Shares of Growth Sectors

Although the Boston LMA's 1980 share of the state's population was 46.1 percent, its 1983 share of total employment was 56.8 percent. The Boston LMA's economic future is the strongest in the state since its employment shares of all four of the state's economic growth sectors -- services, high technology, finance, and trade -- are greater than its share of the state's population. This is the only LMA in which these conditions exist. The Boston LMA's share of total finance employment is 70.2 percent. Its shares of the state's total service jobs is 65.8 percent, and of the state's high technology jobs, 52.8 percent.

BOSTON SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

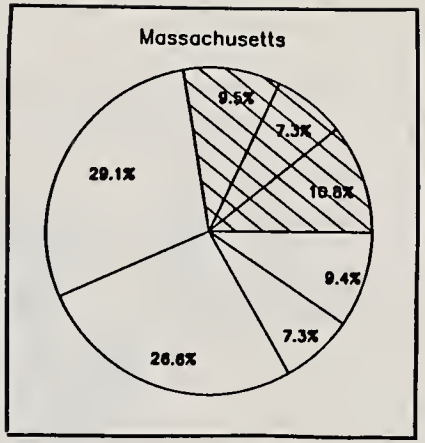
Brockton - Composition

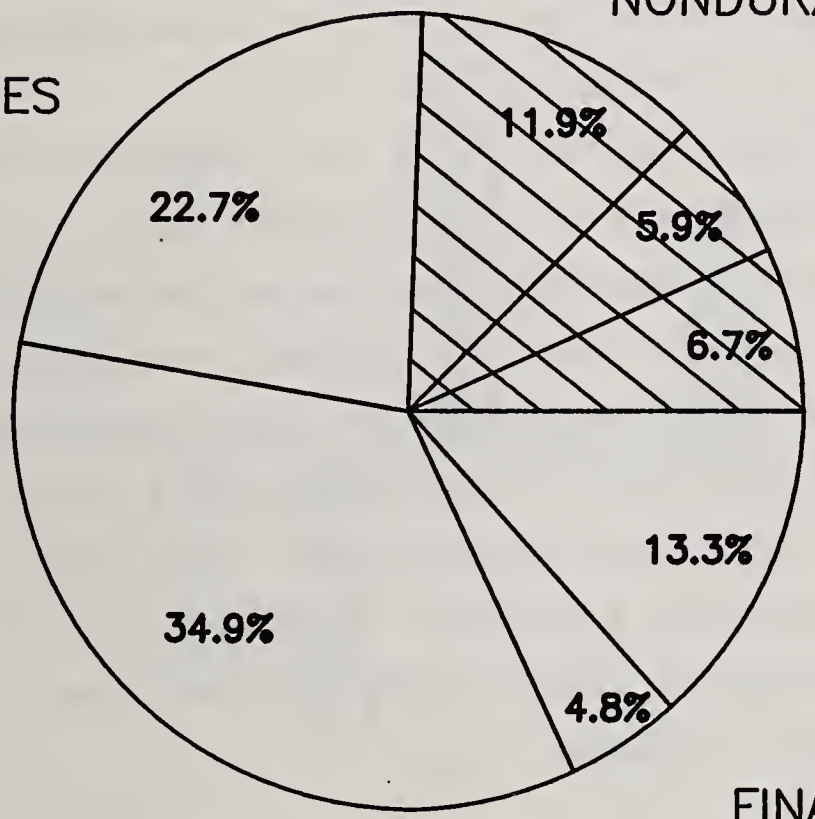
More than one-third (34.9 percent) of the Brockton LMA's total employment is in trade -- a portion that is one-third greater than the state average.

The Brockton LMA's above-average employment in other nonmanufacturing -- 13.3 percent compared with a state average of 9.4 percent -- is due to growth in construction jobs. Almost 20.0 percent of the state's total increase in construction jobs, 1975-1983, was in the Brockton LMA. Construction growth is a reflection of the population increase this LMA has experienced -- 10.3 percent 1970-1980, compared with the state average of 0.8 percent.

The composition of this LMA's manufacturing sector does not position it well for the future. The high technology portion of the Brockton LMA's manufacturing employment is below the state average, while its share of declining nondurable manufacturing jobs is above-average.

COMPOSITION OF EMPLOYMENT – 1983
Brockton





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

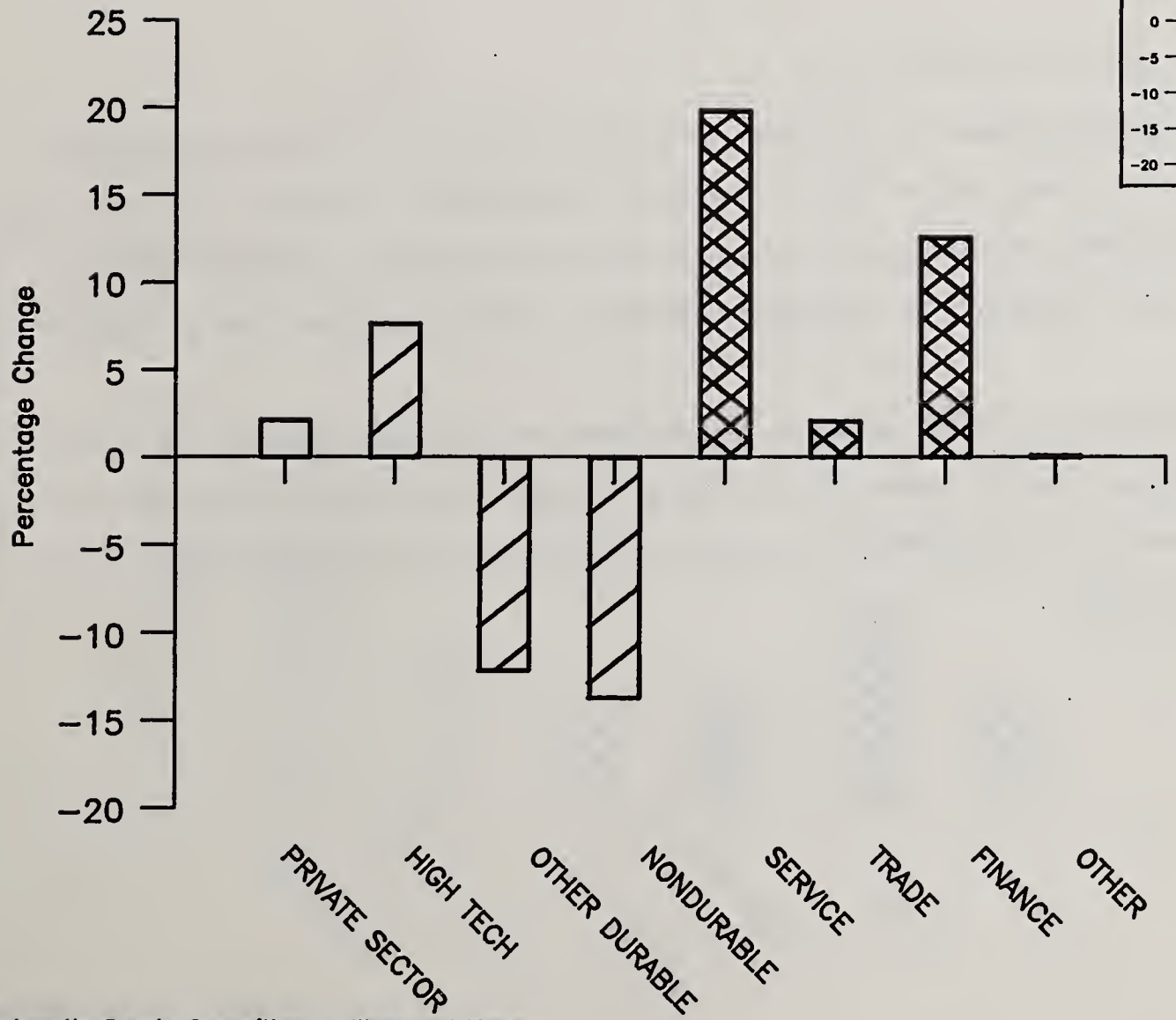
Brockton - 1979-1983 Changes

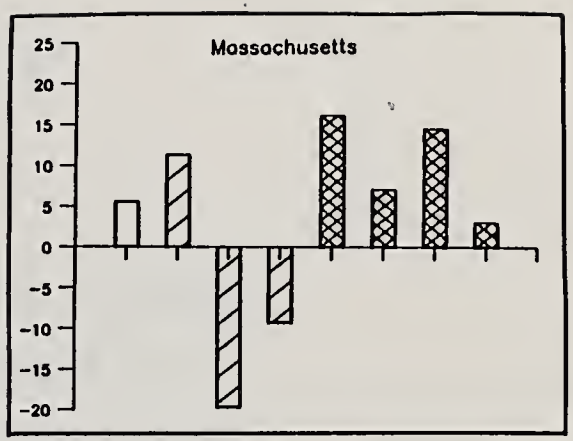
The Brockton LMA's total employment change from 1979-1983 was virtually the same as the state's; the increases and decreases in jobs in the various sectors were also approximately the same as the state averages.

Among manufacturing industries, those in the high technology category had job growth; all others lost jobs, although to a lesser extent than the state. The Brockton LMA had a larger percentage decline in nondurable manufacturing than did the state; this is particularly troubling given the LMA's above average share of its employment in this sector.

On the positive side there is the Brockton LMA's sharp increase in service jobs during 1979-1983, 19.7 percent compared with the state average of 16.1 percent. The number of business service jobs nearly doubled during the period. There was also a large increase in the LMA's health related jobs, 32.0 percent. The Brockton LMA's growth in trade employment was substantially below that of state's, while its increase in finance jobs was almost equal to the state's performance.

EMPLOYMENT CHANGE 1979–1983
Brockton





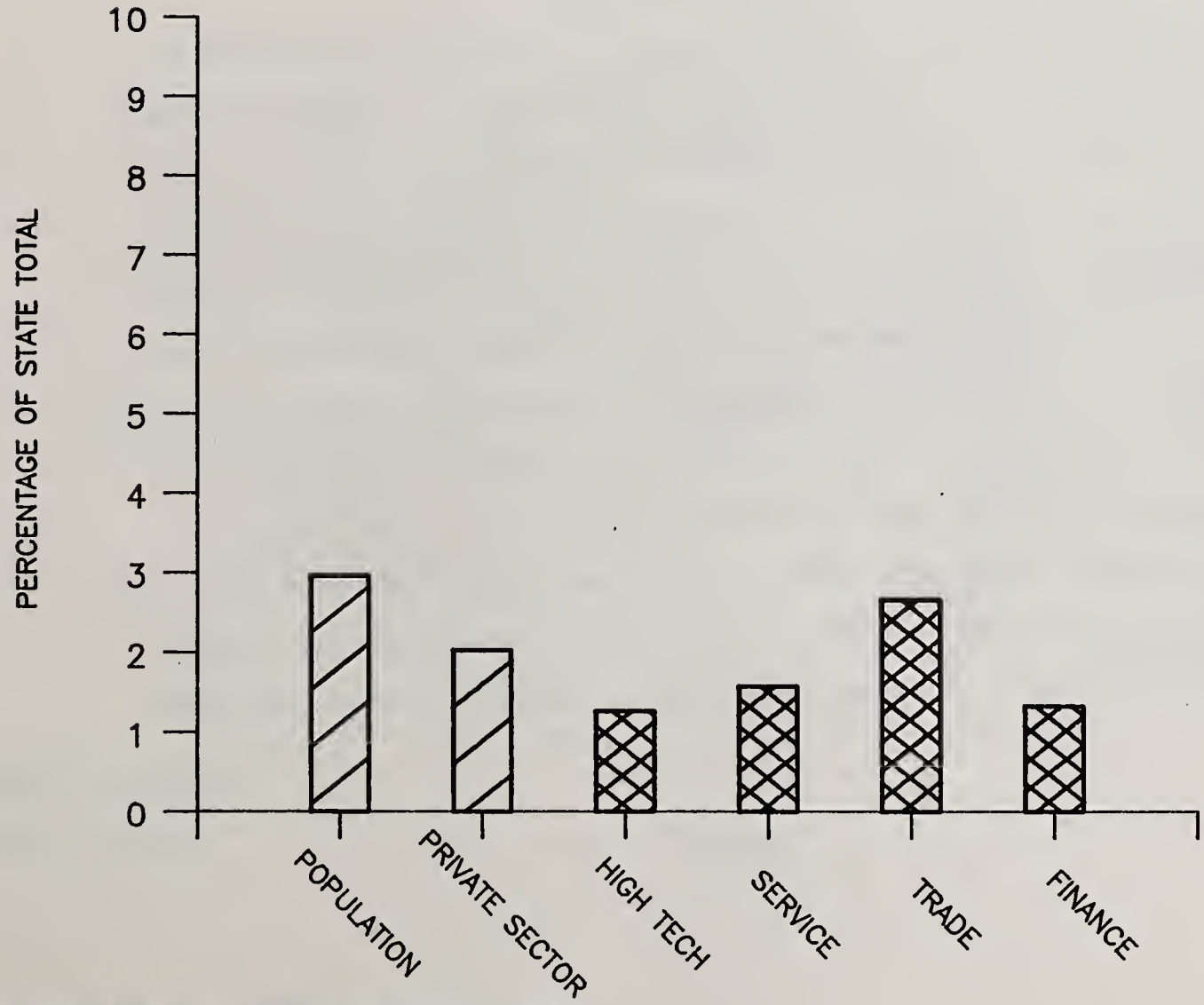
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Brockton - Shares of Growth Sectors

The difference between the Brockton LMA's share of the state's total employment (2.0 percent) and its share of the state's population (3.0 percent) is probably inevitable considering the LMA's contiguity with the Boston LMA. The Boston area's disproportionately higher share of total private employment undoubtedly includes commuters from the Brockton LMA.

Trade is the only growth sector in the Brockton LMA which has a share of the state's total employment that is proportional to the LMA's share of the state's total population. A trade share that is proportional to an LMA's population share is characteristic of all of the major LMAs.

BROCKTON SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



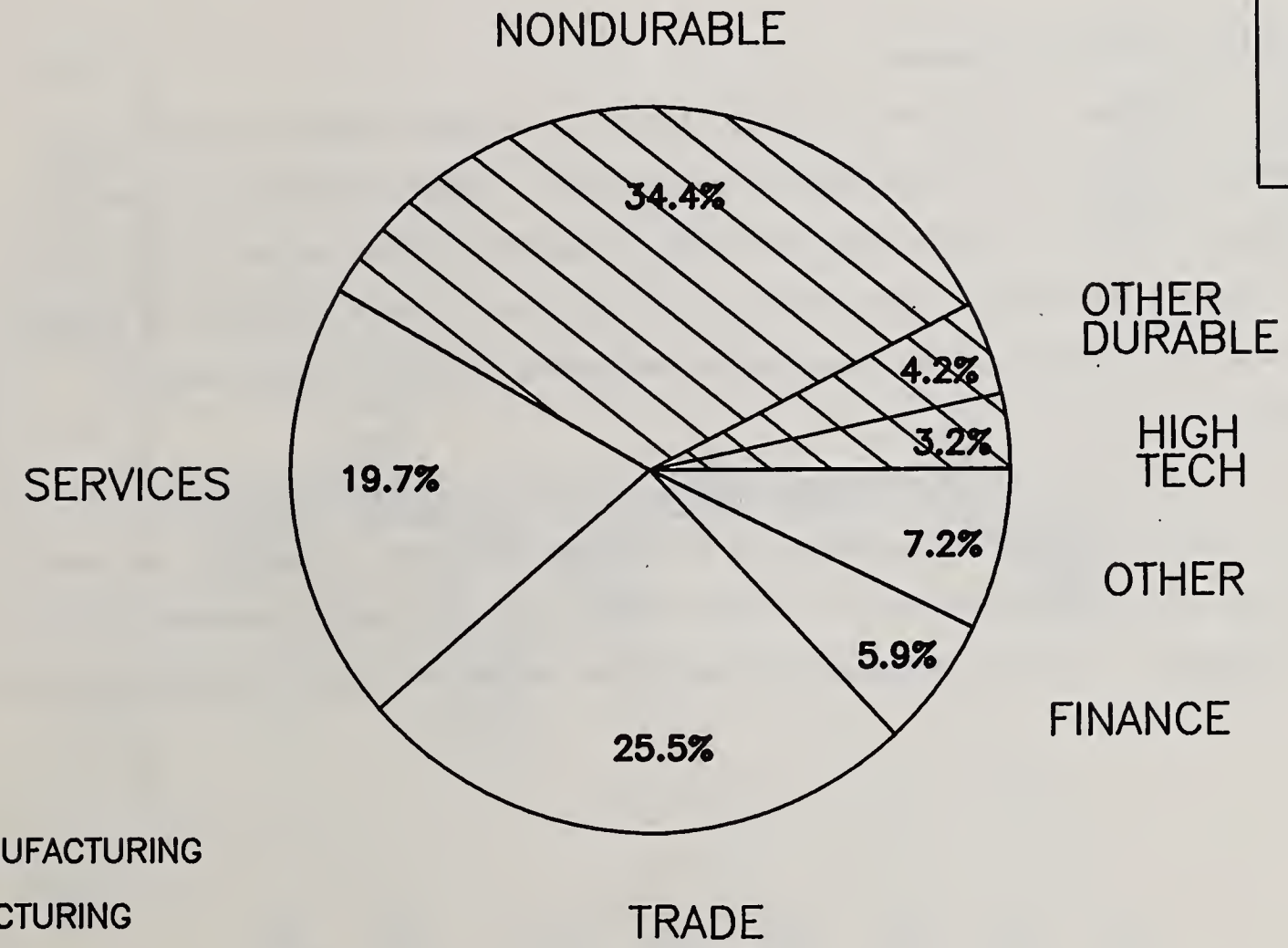
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Fall River - Composition

Compared with the state's other major LMAs, the Fall River area's distribution of manufacturing employment is the least favorable for future growth -- somewhat more than one-third (34.4 percent) of its total employment is in nondurable manufacturing. The state average is less than 10.0 percent. Nondurable manufacturing declined statewide 1975-1983, and the state and national outlooks are poor for the remainder of the 1980s.

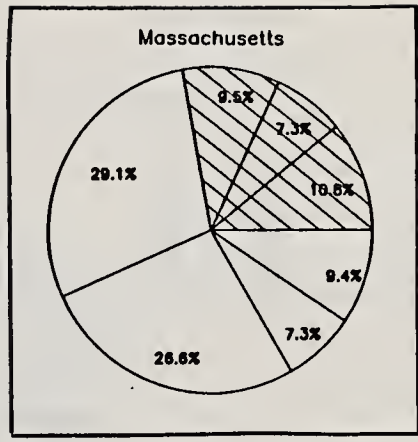
The LMA's economic prospects look even worse when the distribution of jobs within nondurable manufacturing is considered: slightly more than one-half is in apparel manufacturing, a category which statewide lost 13.1 percent of its jobs from 1975-1983; more than one-fourth is in textiles, where the statewide loss of jobs was 20.7 percent. Compared with the state's other major LMAs, the Fall River LMA has the lowest share of its total employment in high technology manufacturing. The Fall River area also lags the state in all other sectors of state employment growth -- services, finance, and trade.

COMPOSITION OF EMPLOYMENT – 1983
Fall River



NONMANUFACTURING

MANUFACTURING



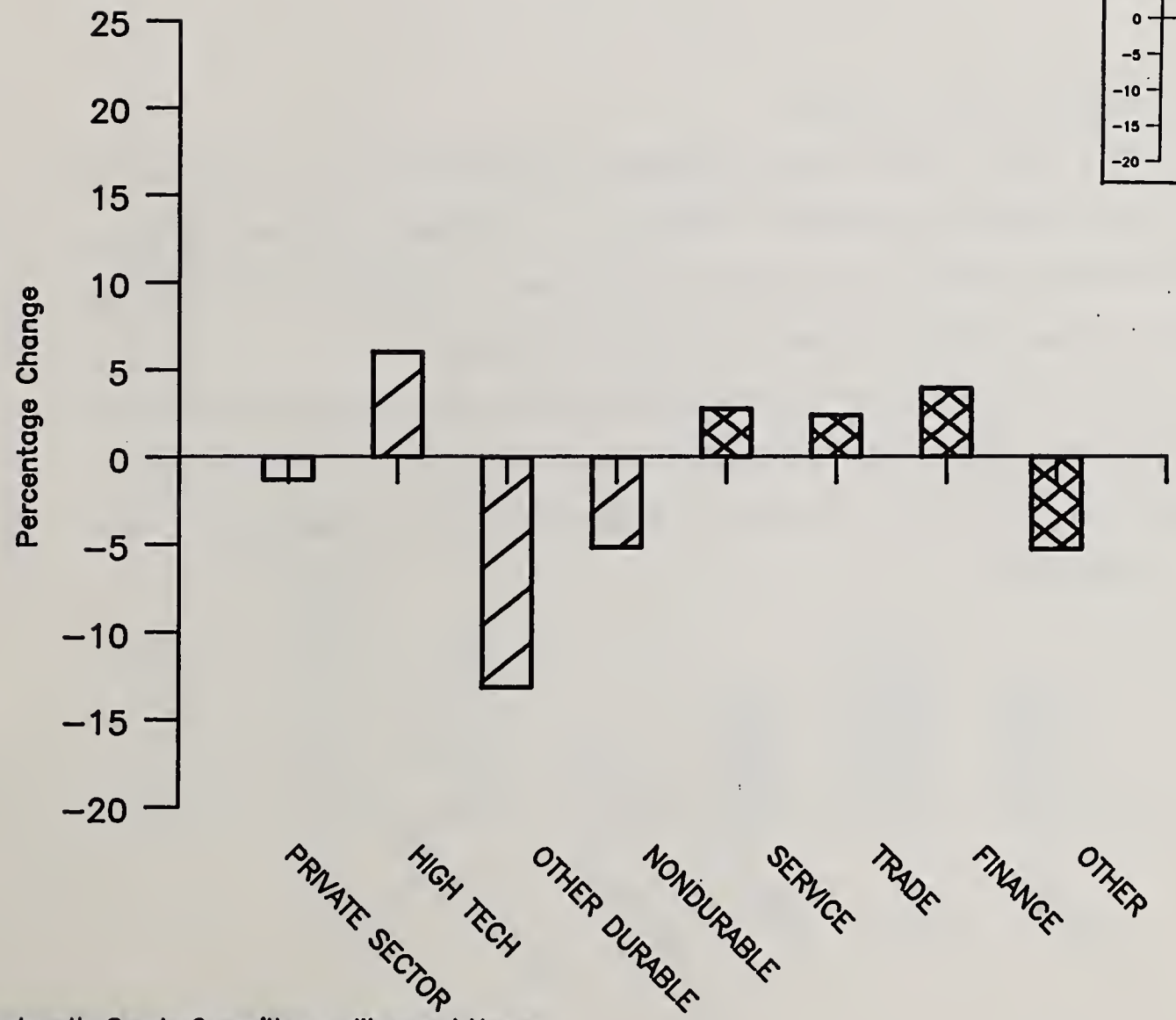
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

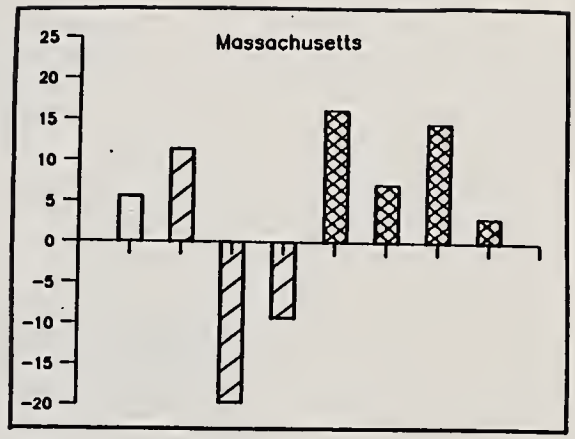
Fall River - 1979-1983 Changes

The Fall River LMA was one of the state's four major labor market areas that experienced losses in total employment from 1979-1983. Although the LMA benefited from increases in service, finance, and trade jobs, its growth in these sectors was not enough to offset its job losses in manufacturing of 5.2 percent. Since 41.9 percent of the LMA's jobs are in manufacturing, the percentage of employment loss meant large numbers of workers were affected.

There was job growth in high technology manufacturing, but this categoy represents such a small share of total employment in the LMA that the number of new jobs was fewer than 100. The weak performance of the LMA's economy -- in the sectors in which the state is strongest -- is not an encouraging sign for the economic future of the Fall River LMA.

EMPLOYMENT CHANGE 1979–1983
Fall River





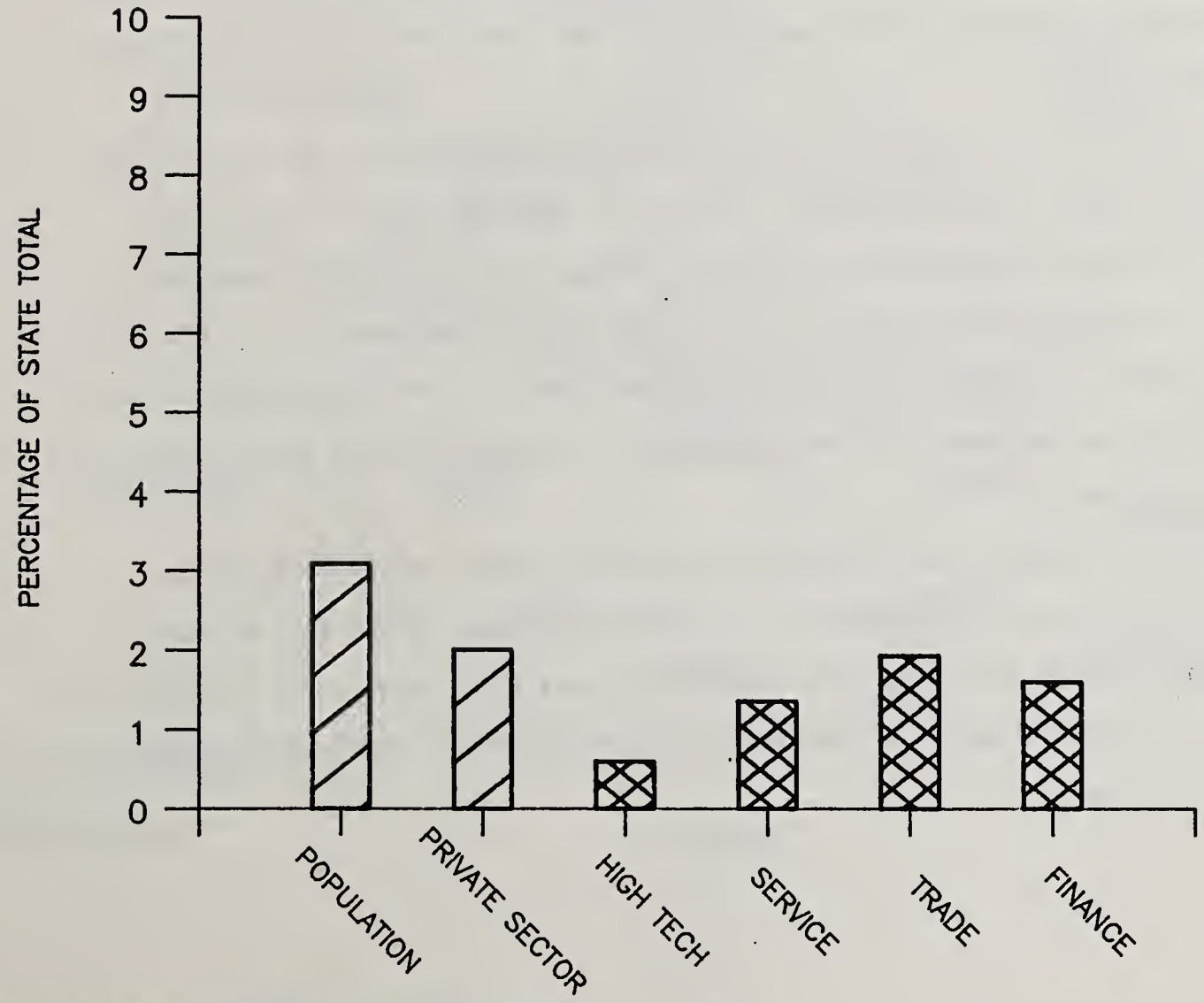
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Fall River - Shares of Growth Sectors

The Fall River LMA's share of total employment is well below its share of the state's population. The cause may be residents' commuting to a contiguous metropolitan area (Providence, Rhode Island) or it may also be unemployment. In 1983 the Fall River LMA's unemployment rate was one-third greater than the state average.

The Fall River LMA's shares of trade and finance employment are comparable to its share of the state's total private employment, but one-third below its share of the state's population. Its share of the state's total high technology employment is extremely low -- 0.6 percent.

FALL RIVER SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

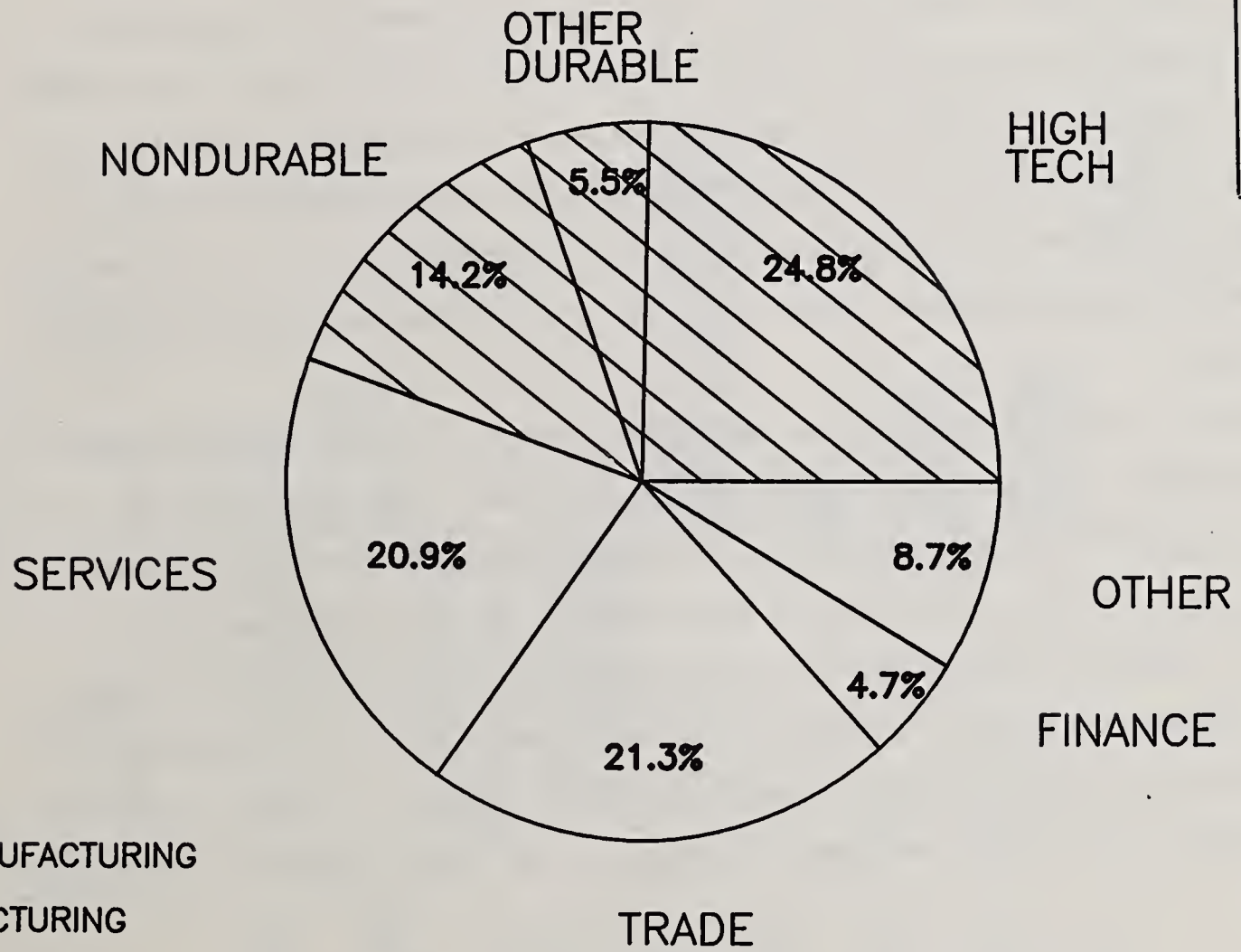
Lawrence-Haverhill - Composition

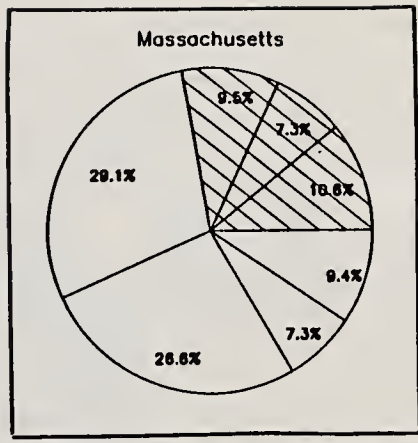
The Lawrence-Haverhill LMA's employment is predominantly in manufacturing, 44.7 percent. The Lawrence-Haverhill LMA is second only to the Lowell LMA in its manufacturing concentration.

Due to the type of manufacturing located in the Lawrence-Haverhill LMA, the outlook for the area's economic future is mostly optimistic. More than twice as much of its employment is in high technology than the state average. Its mix of high technology industries is strong, with 11.0 percent of the state's total employment in the five high technology industrial categories with the most rapid growth -- office and computing machinery, communications equipment, electronic components, guided missiles, and measuring and controlling instruments.

On the less optimistic side is the Lawrence-Haverhill LMA's above-average share of nondurable manufacturing, 14.0 percent of its total employment. Given the LMA's job losses in these sectors during the most recent four years (1979-1983) -- 15.0 percent compared with the state average of 9.7 percent -- this above-average share could present a problem for the LMA.

COMPOSITION OF EMPLOYMENT – 1983
Lawrence





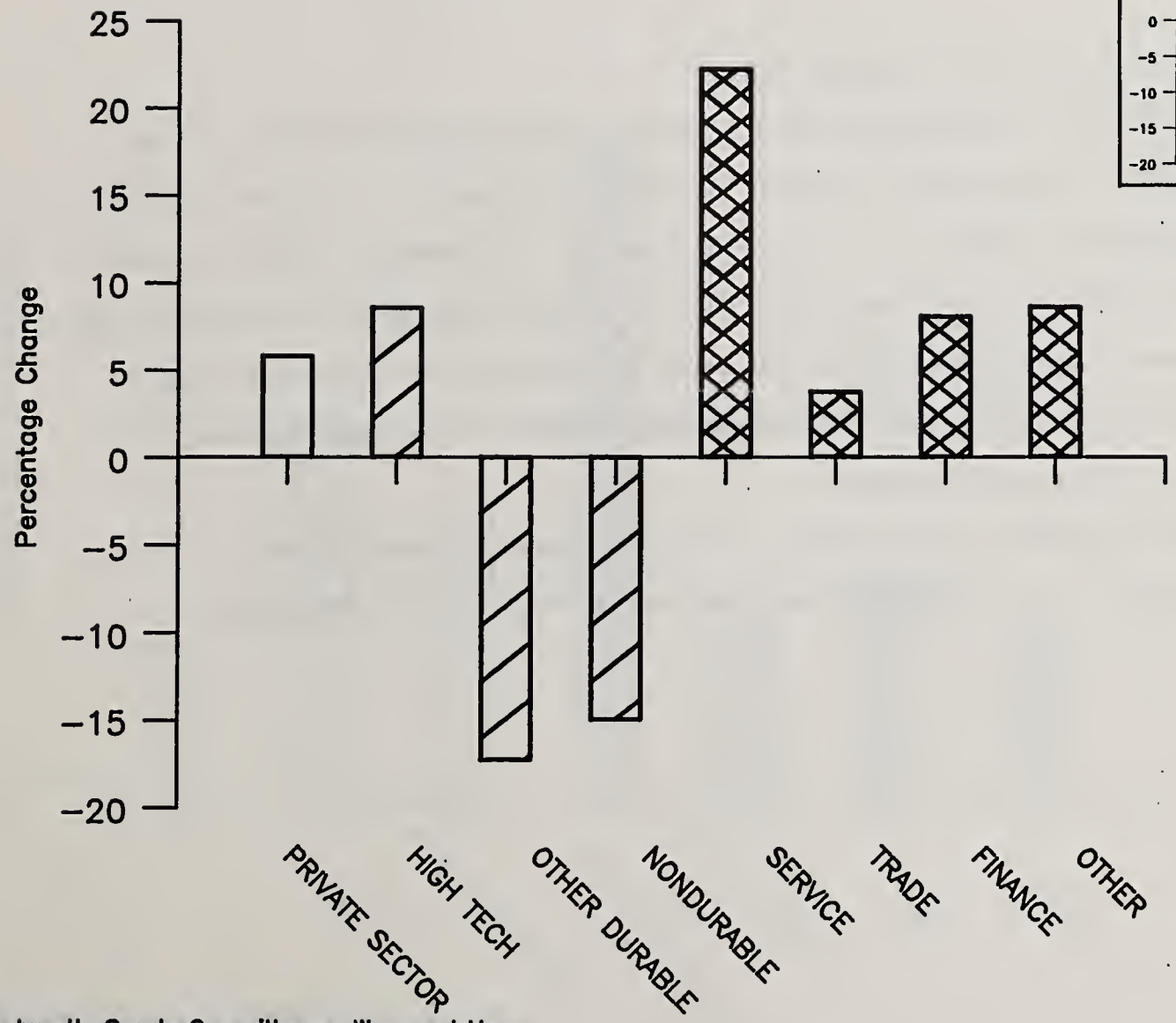
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

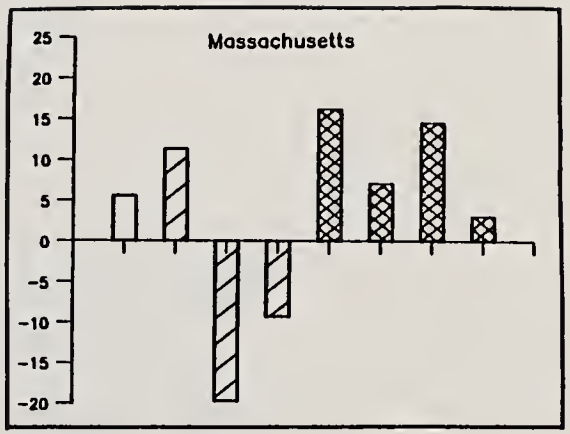
Lawrence-Haverhill - 1979-1983 Changes

The Lawrence-Haverhill LMA's increase in high technology manufacturing employment during 1979-1983 (8.6 percent) kept pace with the Boston LMA's (8.2 percent) but was below the state average (11.3 percent). Since the state average increase was boosted by the extraordinary growth of high technology employment in the Lowell LMA, it is more appropriate to compare the Lawrence-Haverhill LMA's 8.6 percent growth in high technology employment with the 6.9 percent growth in the rest of the state (the total excluding the Lowell LMA).

Expansion in service employment was one of the bright spots in the Lawrence-Haverhill LMA's employment picture from 1979-1983. Service employment growth was 22.1 percent, the highest of any of the state's major LMAs, with substantial growth occurring in business services (89.7 percent), social services (64.1 percent), and health services (18.8 percent). During the 1979-1983 period, the Lawrence-Haverhill LMA's largest job losses were in leather manufacturing, although this sector's rate of decline was less severe in this LMA than the state average (16.3 compared with 27.9 percent). In 1983, 18.0 percent of the state's total leather employment was located in the Lawrence-Haverhill LMA.

EMPLOYMENT CHANGE 1979–1983
Lawrence





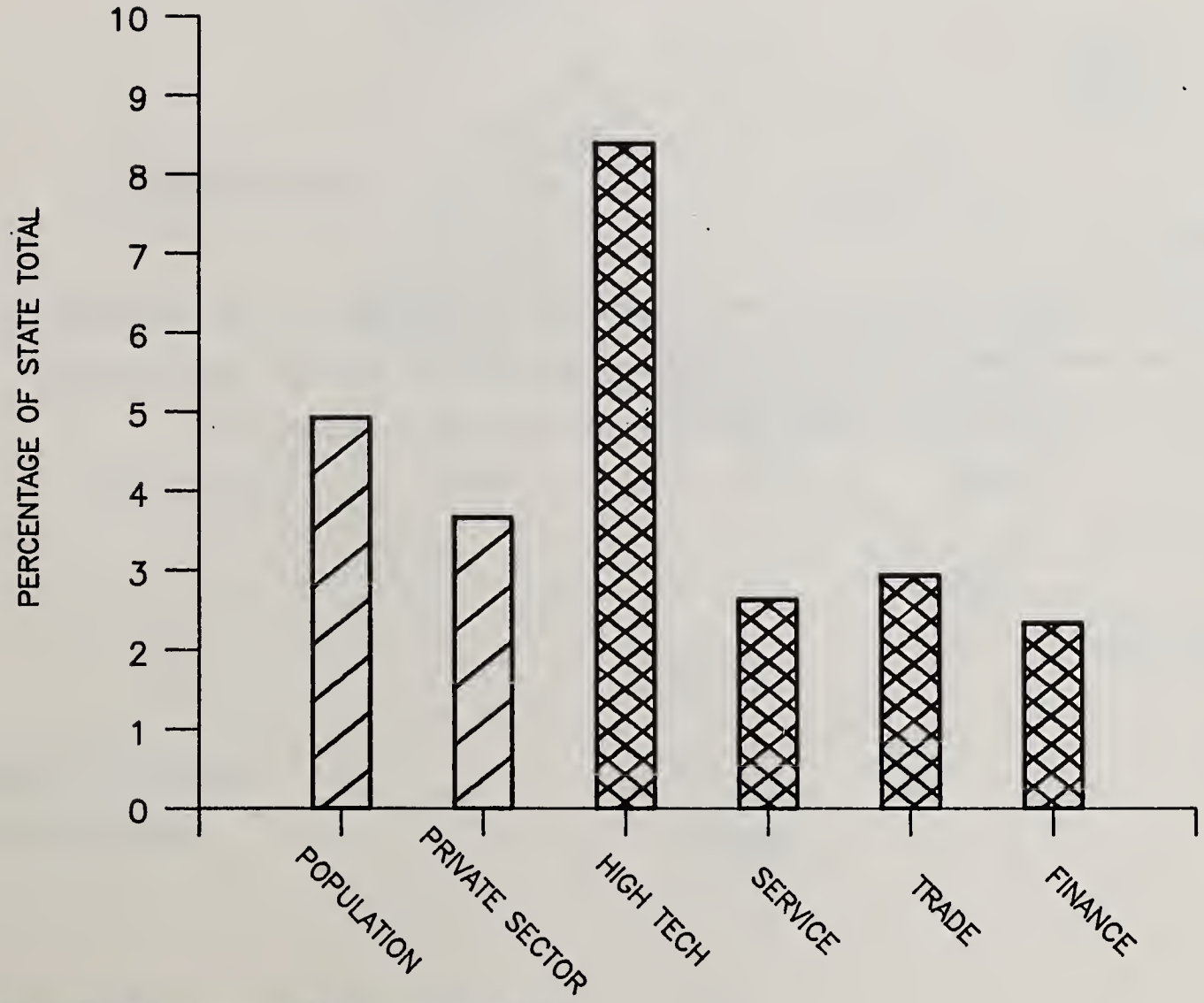
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Lawrence-Haverhill - Shares of Growth Sectors

It is clear that high technology manufacturers in the Lawrence-Haverhill LMA are attracting workers from outside the area. In 1983, 8.4 percent of the state's high technology employment was located in the Lawrence-Haverhill LMA, compared with 4.9 percent of the state's population and 3.7 percent of its total private employment. Because the LMA's total employment is below its share of the state's population, the difference suggests that a portion of the LMA's work force is employed in other LMAs, and it reflects high unemployment in the city of Lawrence.

The Lawrence-Haverhill LMA's shares of the other economic growth sectors -- services, trade, and finance -- are roughly proportional to its share of total employment.

LAWRENCE SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES

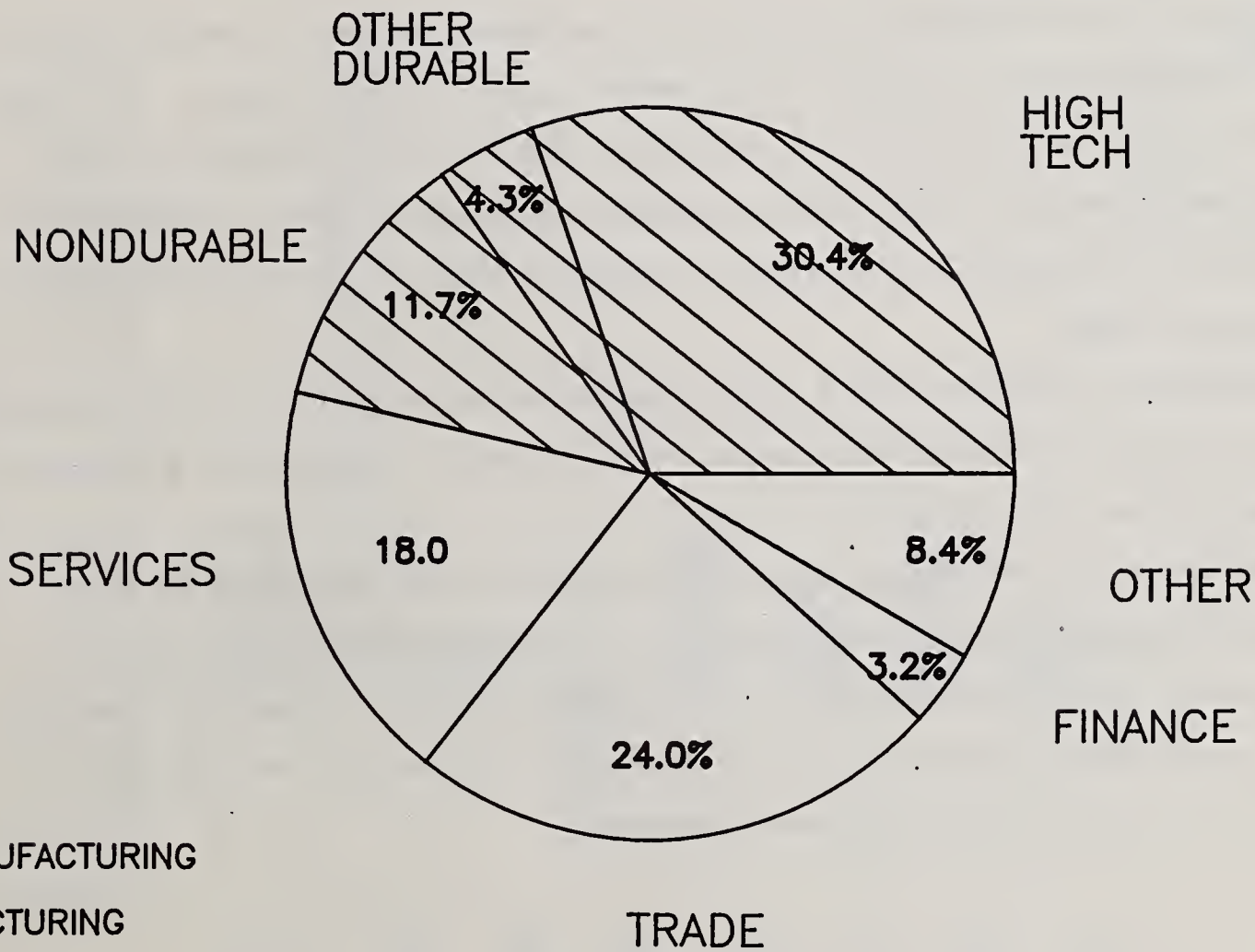


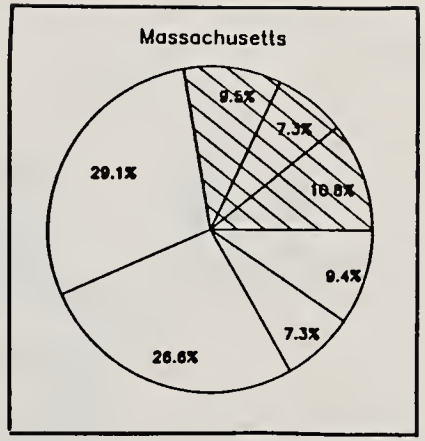
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Lowell - Composition

The remarkable feature of the Lowell LMA's composition of employment is the percentage of its total employment that is in high technology -- nearly three times the state average, 30.4 percent of total employment compared with the state average of 10.8 percent.

COMPOSITION OF EMPLOYMENT – 1983
Lowell





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

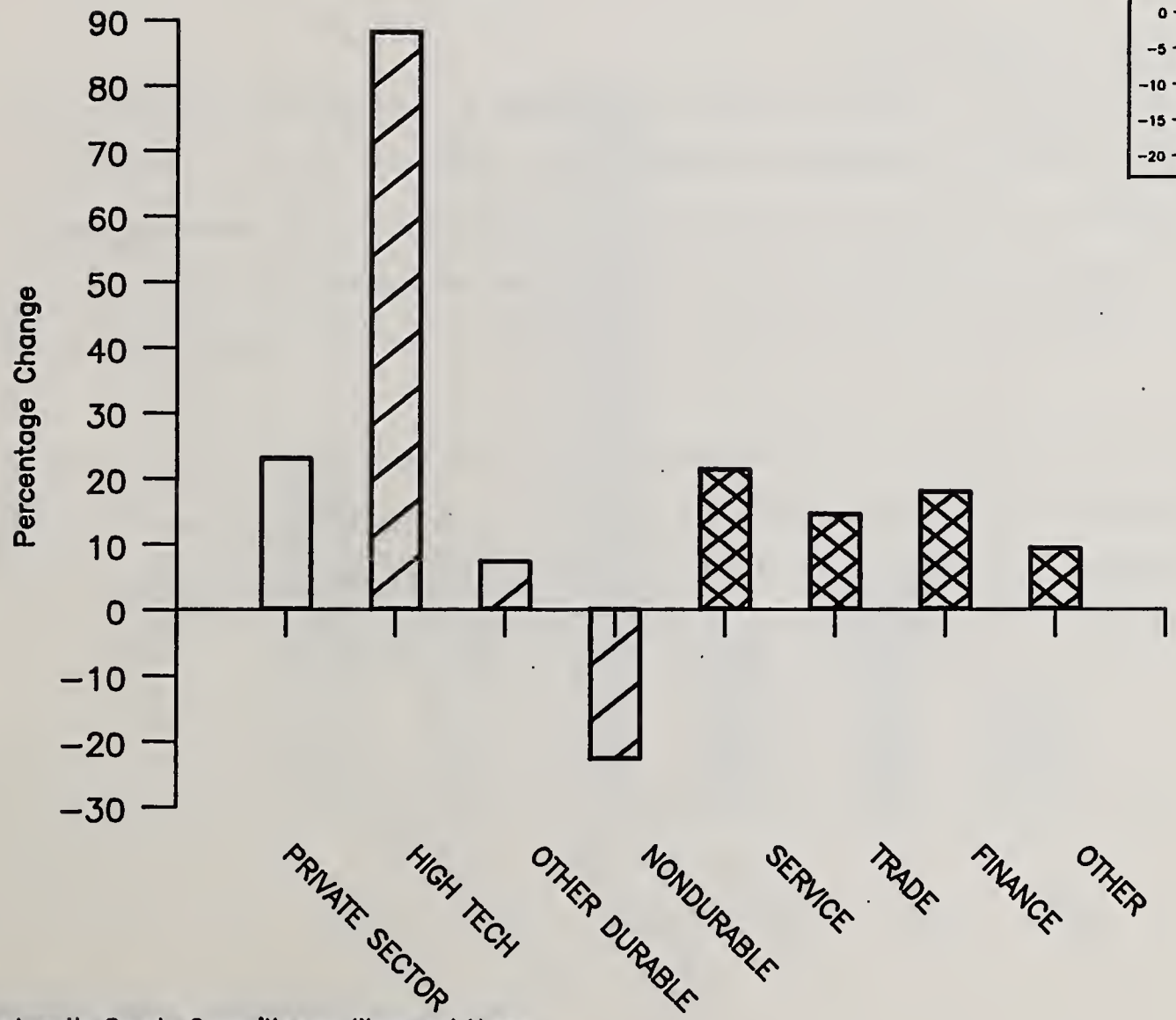
Lowell - 1979-1983 Changes

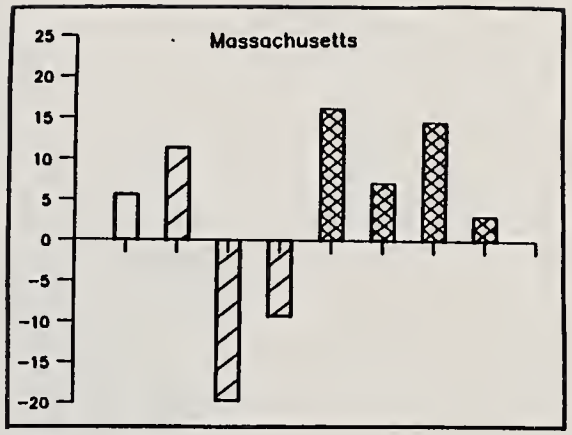
During the 1979-1983 period, total private employment increased in the Lowell LMA at a rate four times that of the state -- 22.9 percent compared with 5.5 percent. The largest increase was in high technology. Of the state's 32,430 new jobs (1979-1983) in office and computing machinery, communications equipment, electronic component, guided missiles, and measuring and controlling instruments; nearly one-third (30.0 percent) were located in the Lowell LMA.

Employment in the Lowell LMA's other durable manufacturing sectors besides high technology also was strong during this period, rising 7.2 percent compared with a statewide average decline of 19.7 percent.

During the 1979-1983 period, some Lowell LMA manufacturing sectors had job losses. Nondurable manufacturing employment declined 22.3 percent, twice the state's average for this period. Yet despite this steep rate of job loss, the LMA's average 1983 unemployment rate was the lowest of any of the state's major LMAs. This suggests that employees who lost jobs were able to shift into other employment.

EMPLOYMENT CHANGE 1979–1983
Lowell





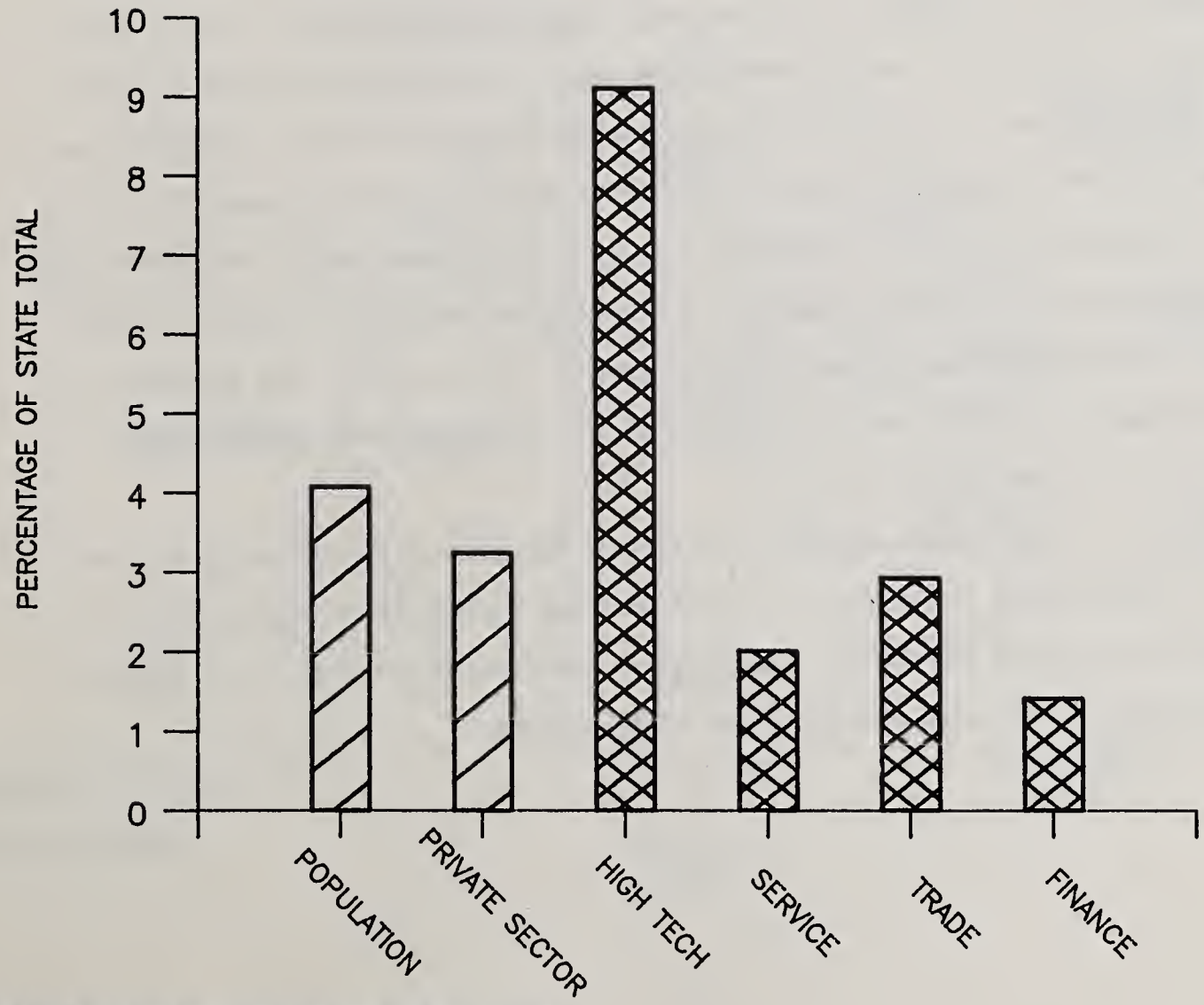
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Lowell - Shares of Growth Sectors

The large differences between the Lowell LMA's share of total state population and its share of total state high technology employment make it clear that there is a substantial flow of commuters into this area and that they are concentrated in high technology jobs. In 1983, 9.1 percent of the state's total high technology employment was located in the Lowell LMA. This was more than two times the LMA's share of the state's population, 4.1 percent.

Despite rapid growth in the 1979-1983 period, the Lowell LMA's share of total state service employment is disproportionately low relative to both its population and its total private employment. The LMA's share of finance industry jobs is similarly disproportionate, whereas its trade employment is approximately proportionate.

LOWELL SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



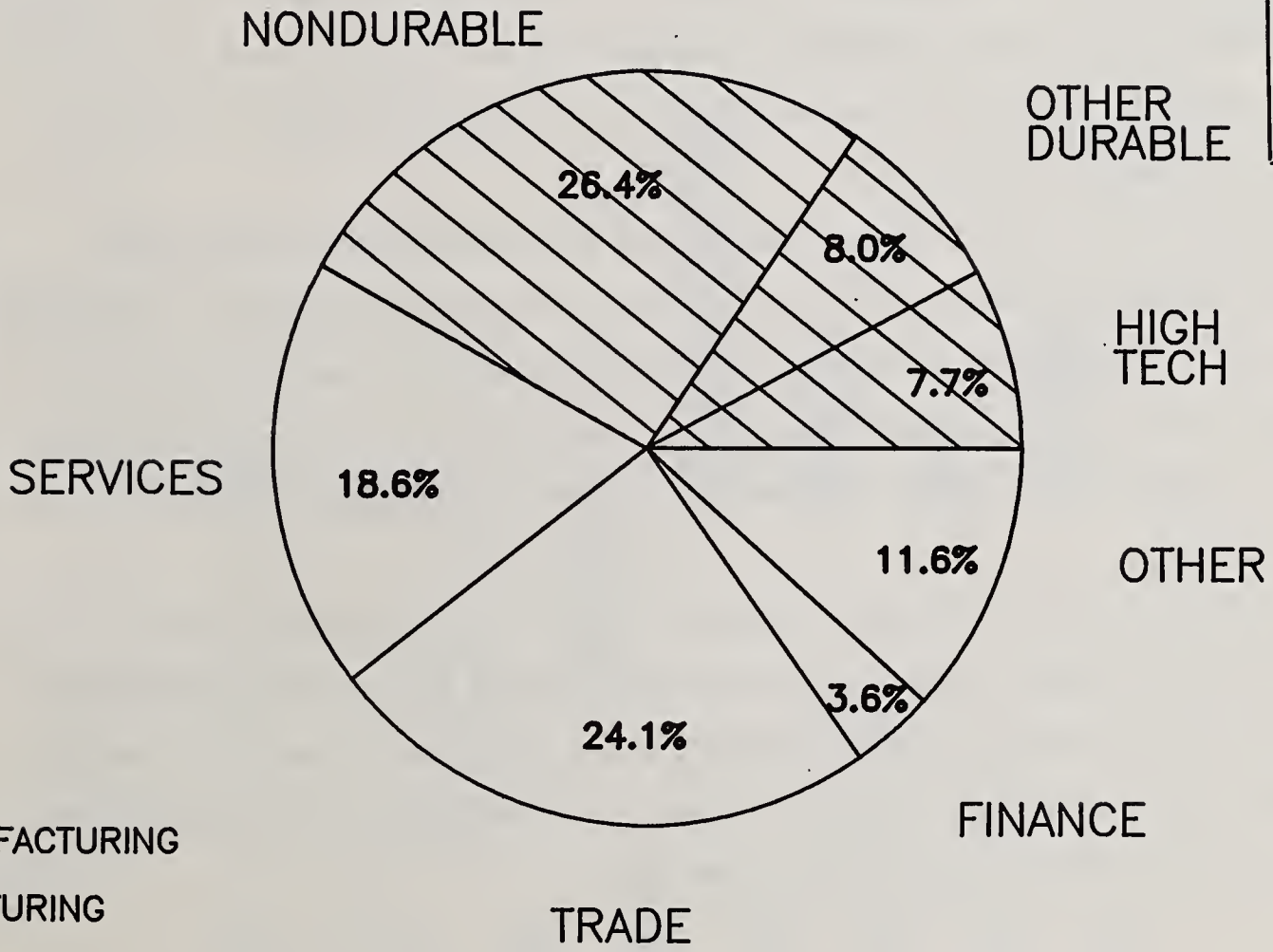
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

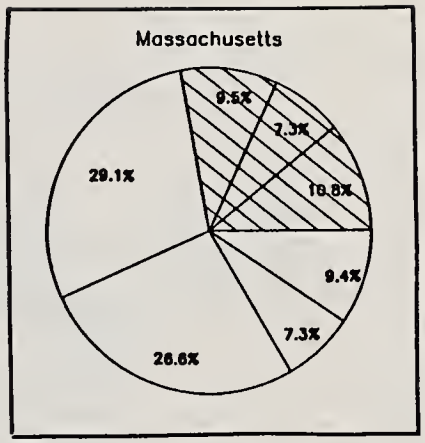
New Bedford - Composition

The composition of employment in the New Bedford LMA explains the area's current economic distress. (In 1983 its average unemployment rate, 10.0 percent, was substantially above the state average, 6.9 percent.) The percentage of the LMA's total employment that is in nondurable manufacturing is twice the state average, 26.2 percent compared with 9.5 percent. Employment in the New Bedford LMA is concentrated in the sectors which have been experiencing job losses statewide (apparel and textiles) and which are forecast to have the weakest outlook among manufacturers at the national level as well. (See Appendix 1: Projected Changes.) In 1983, over 20.0 percent of the state's apparel manufacturing employment was in the New Bedford LMA.

Unfortunately, the New Bedford LMA has relatively few jobs in the sectors which have had the most rapid growth statewide. Its share of total employment in service jobs is only two-thirds the state average and its shares of two other growth sectors -- high technology and finance -- are also well below the state average.

COMPOSITION OF EMPLOYMENT – 1983
New Bedford





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

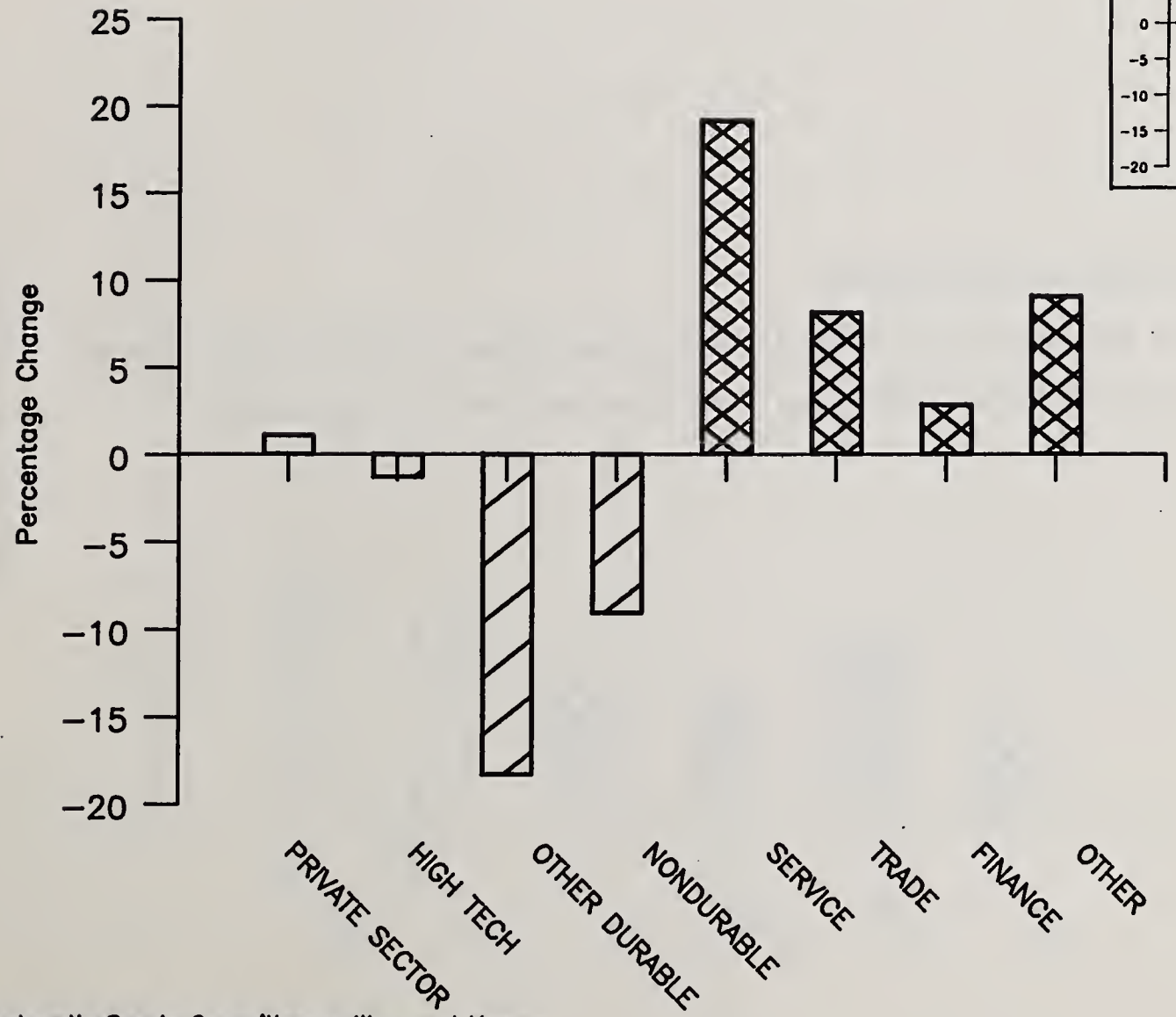
New Bedford - 1979-1983 Changes

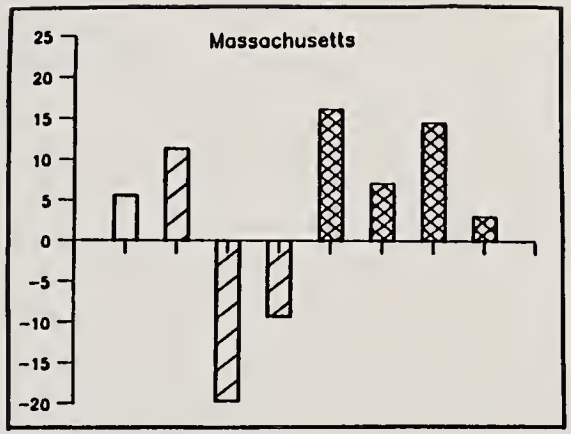
Total employment in the New Bedford LMA increased only 1.1 percent from 1979-1983, compared with the state average of 5.5 percent. There were job losses in all categories of manufacturing, even high technology. The LMA's other durable and nondurable manufacturing employment declined at rates parallel with the statewide average -- 18.3 percent and 9.7 percent respectively.

On the positive side, from 1979-1983 the New Bedford LMA's service employment increased somewhat faster than the state average; unfortunately, the base for the growth was so small, less than 16.0 percent of private employment, that even the sharp rate of increase resulted in fewer than 1700 new jobs. (Approximately 2,700 manufacturing jobs were lost during this period.) Three-fourths of the area's new service jobs were in the health category.

The New Bedford LMA also outperformed the state in its percentage increase in "other nonmanufacturing" jobs. These new jobs were approximately equally distributed between agriculture (the commercial fishing category) and construction. Although the rate of growth of new jobs was above the state average, the actual number of new jobs in these combined sectors was only slightly more than 500.

EMPLOYMENT CHANGE 1979–1983
New Bedford



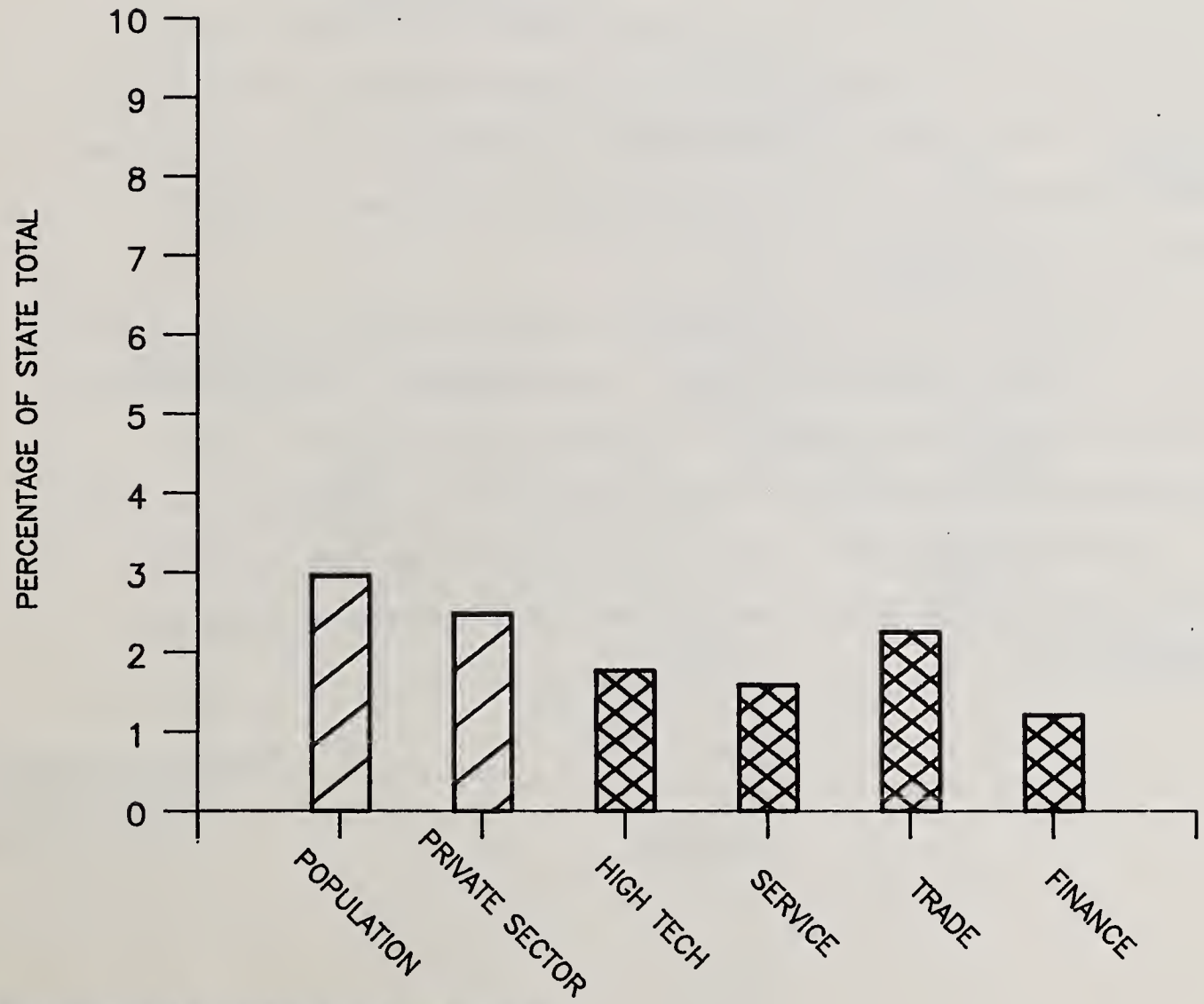


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

New Bedford - Shares of Growth Sectors

In three of the state's four growth sectors the New Bedford LMA's employment is below its share of the state's total employment. Its trade employment is proportional.

NEW BEDFORD SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



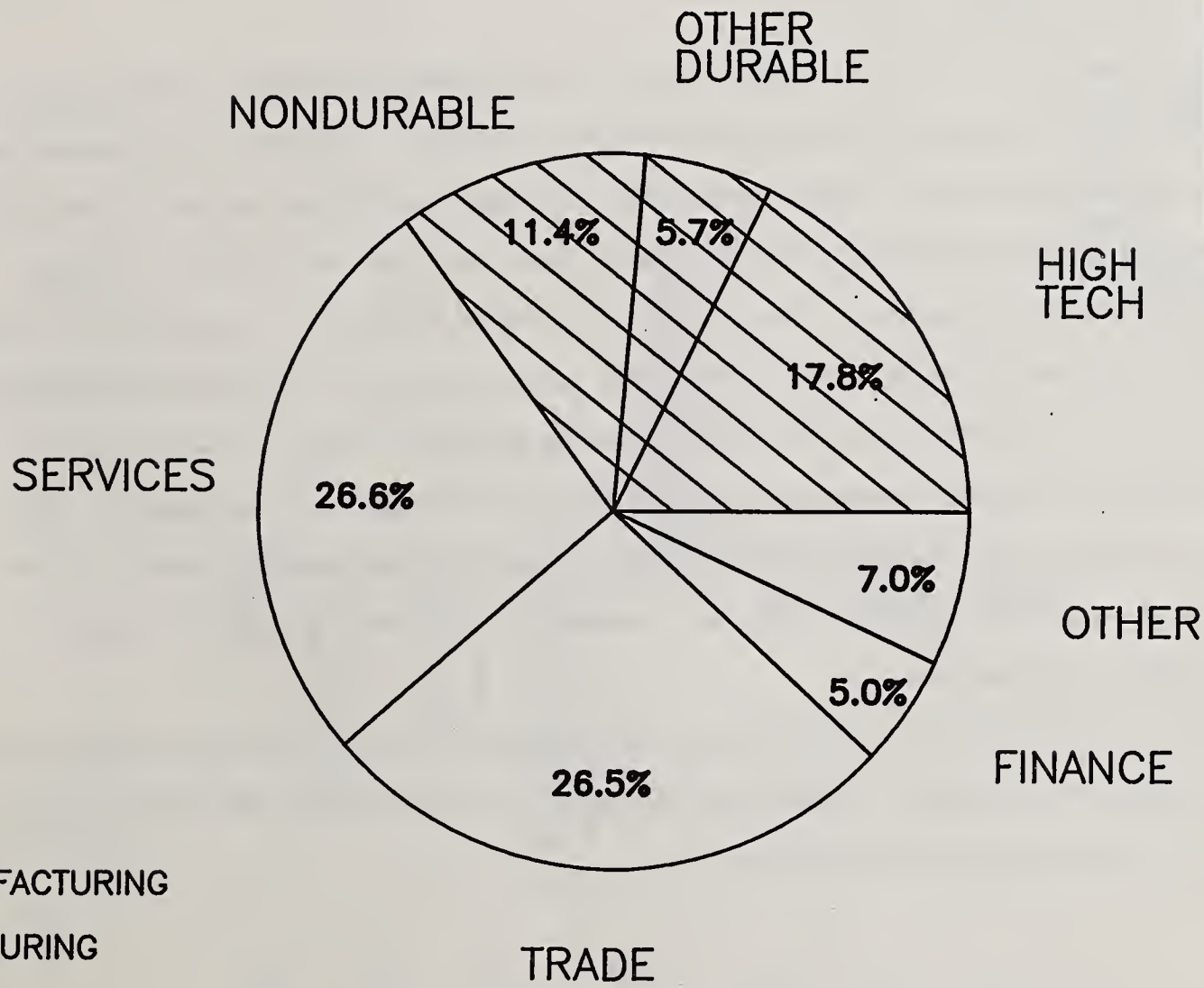
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

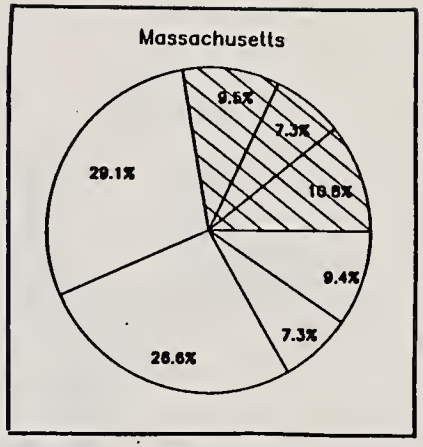
Pittsfield - Composition

The composition of the Pittsfield LMA's employment appears to be relatively strong. The LMA's concentration of manufacturing employment in high technology is more than one and one-half times the state average. Unfortunately, this indicator is less clearly one of above-average strength since (as the following table shows) the area's high technology employment has been declining.

The LMA's above-average share of total employment in nondurable manufacturing, (which generally is not a favorable characteristic due to state and national employment declines in several nondurable manufacturing sectors), is mitigated by the fact that in the Pittsfield LMA nondurable manufacturing is comprised principally of manufacturers of paper and printing. Statewide, manufacturers of paper have had a relatively small employment decline, (compared with apparel, leather, and textiles), while the printing sector has has had employment increases.

COMPOSITION OF EMPLOYMENT – 1983
Pittsfield





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

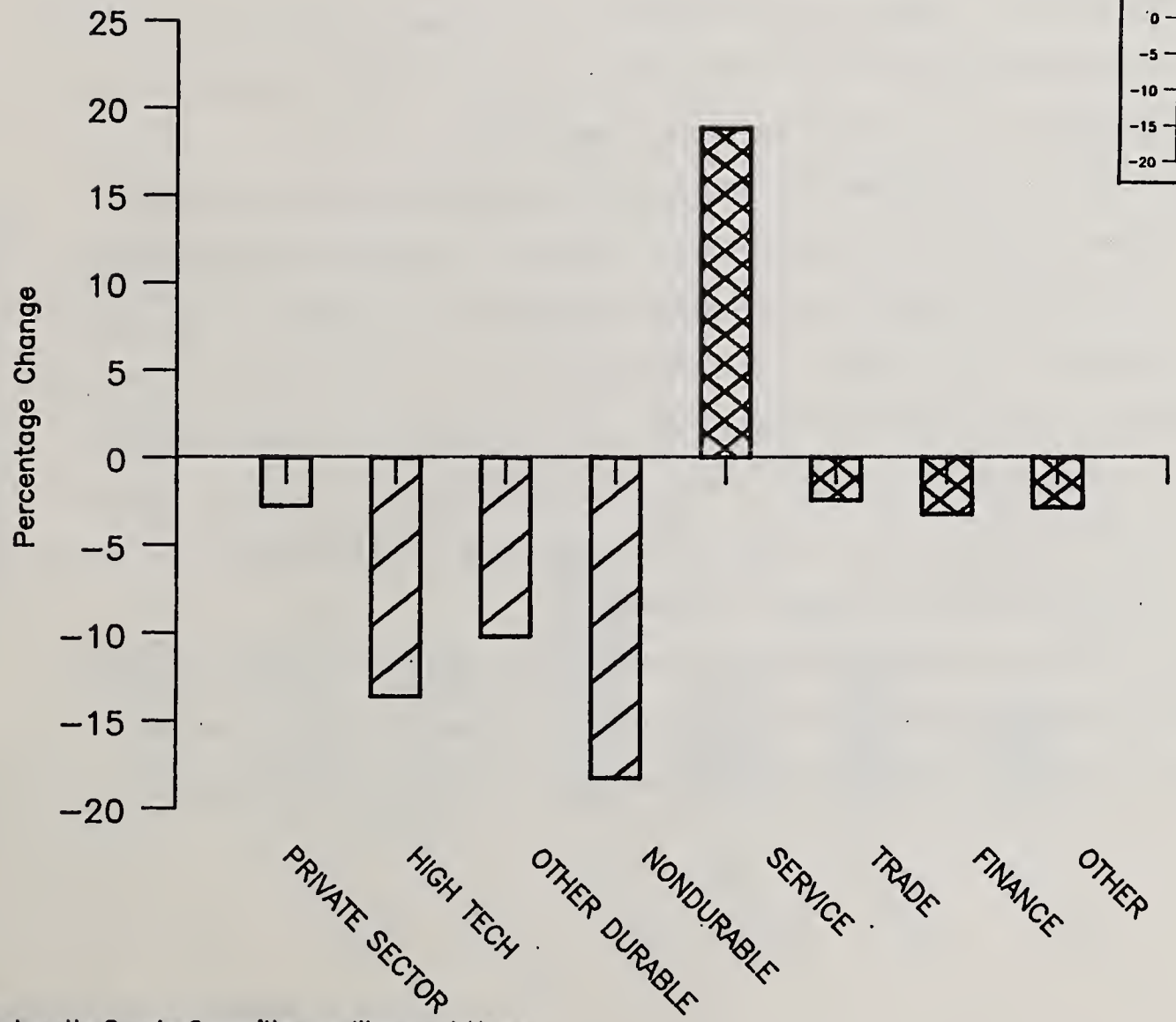
Pittsfield - 1979-1983 Changes

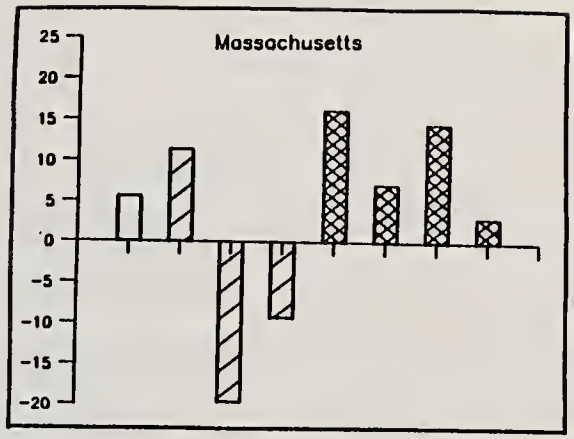
The recent percentages of change in the Pittsfield LMA's employment have been less favorable for its economy than the distribution of its jobs. The LMA's high technology jobs have been declining. Although other LMAs also experienced high technology job losses during 1979-1983, Pittsfield is the only LMA to have had a decline in high technology employment during the previous four year period as well, 1975-1979. The LMA's high technology job losses, 1975-1983, were principally in the electrical distributing category.

The rest of the Pittsfield LMA's manufacturing employment shows a mixed picture: other durable employment decreased less than the state average, and employment in the printing sector of its nondurable employment increased. Unfortunately, losses in other sectors of nondurable employment were more severe; in textiles and paper, a total of approximately 900 employees.

The Pittsfield LMA lost more nonmanufacturing jobs during 1979-1983 than any of the other major LMAs. The LMA's finance jobs declined 3.2 percent during the 1979-1983 period, and its trade jobs declined 2.4 percent.

EMPLOYMENT CHANGE 1979–1983
Pittsfield





Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

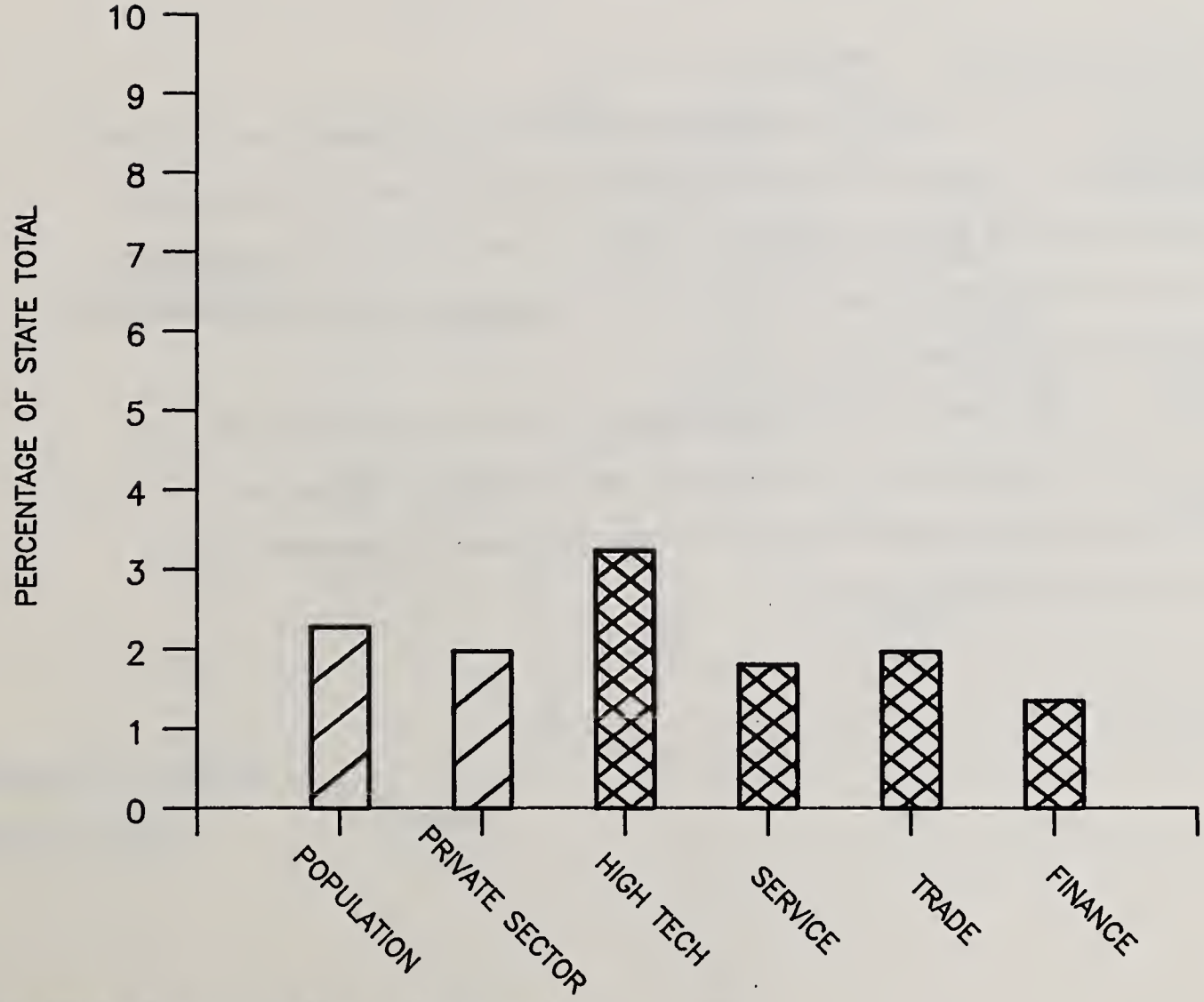
Pittsfield - Shares of Growth Sectors

The Pittsfield LMA's shares of state employment in the major growth sectors indicates a satisfactory economic condition; and its share of the state's total employment is nearly proportionate to its share of the state's population.

The LMA's share of high technology manufacturing exceeds its population share by nearly 25 percent, indicating a concentration of the LMA's work force in this employment category. The Pittsfield LMA's high technology employment is 3.2 percent of the state's total; its population is 2.3 percent. This disproportion is a characteristic of the Boston, Lawrence-Haverhill, Lowell, and Pittsfield LMAs. The Pittsfield LMA's high technology employment is 3.2 percent of the state's total; its population is 2.3 percent. However, the LMA's economic prospects must be viewed with some degree of caution due to its losses in high technology employment throughout 1975-1983.

In 1983 this LMA has almost one-half the state's total employment in the manufacture of electrical distributing equipment and approximately 11.0 percent and 3.0 percent respectively of the state's manufacture of communications and electronic equipment.

PITTSFIELD SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



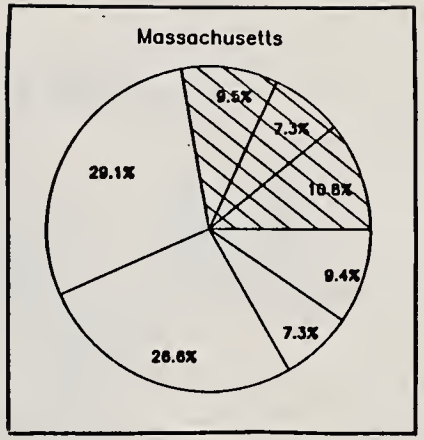
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

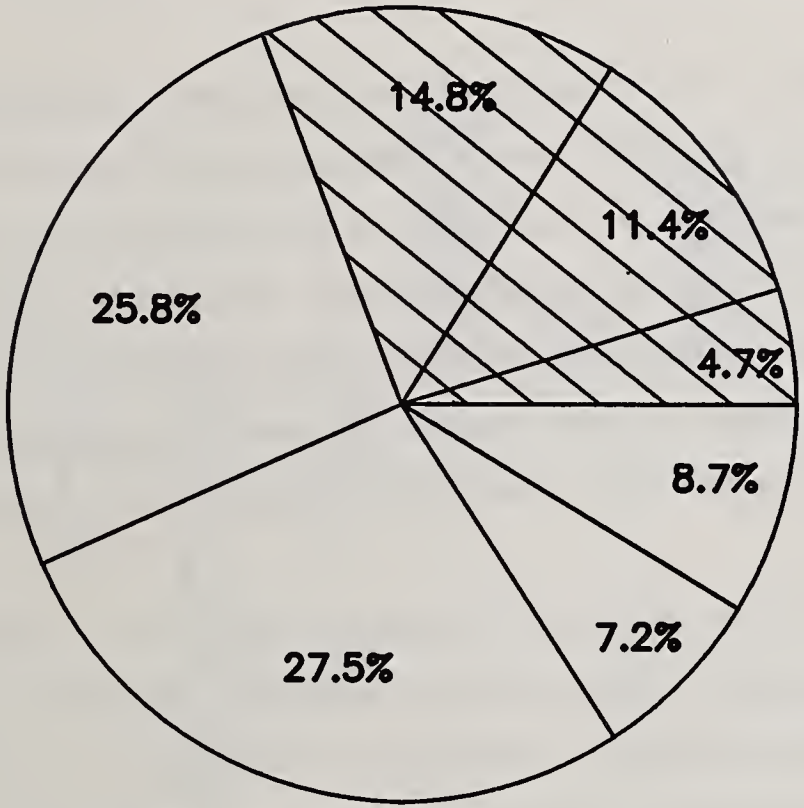
Springfield-Chicopee-Holyoke - Composition

The distribution of the Springfield-Chicopee-Holyoke LMA's employment does not indicate a strong economic forecast. The manufacturing sectors with the greatest recent growth statewide, and with the most optimistic forecasts, are not heavily represented. Instead, it has an above-average share of its total employment in the manufacturing sectors which have been declining.

The LMA has a larger share of its total employment in manufacturing than the state average (30.9 percent compared with 27.7 percent), but its high technology share is less than one-half the state average and the share of its employment in nondurable manufacturing is one-and-one-half times greater.

COMPOSITION OF EMPLOYMENT – 1983
Springfield





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

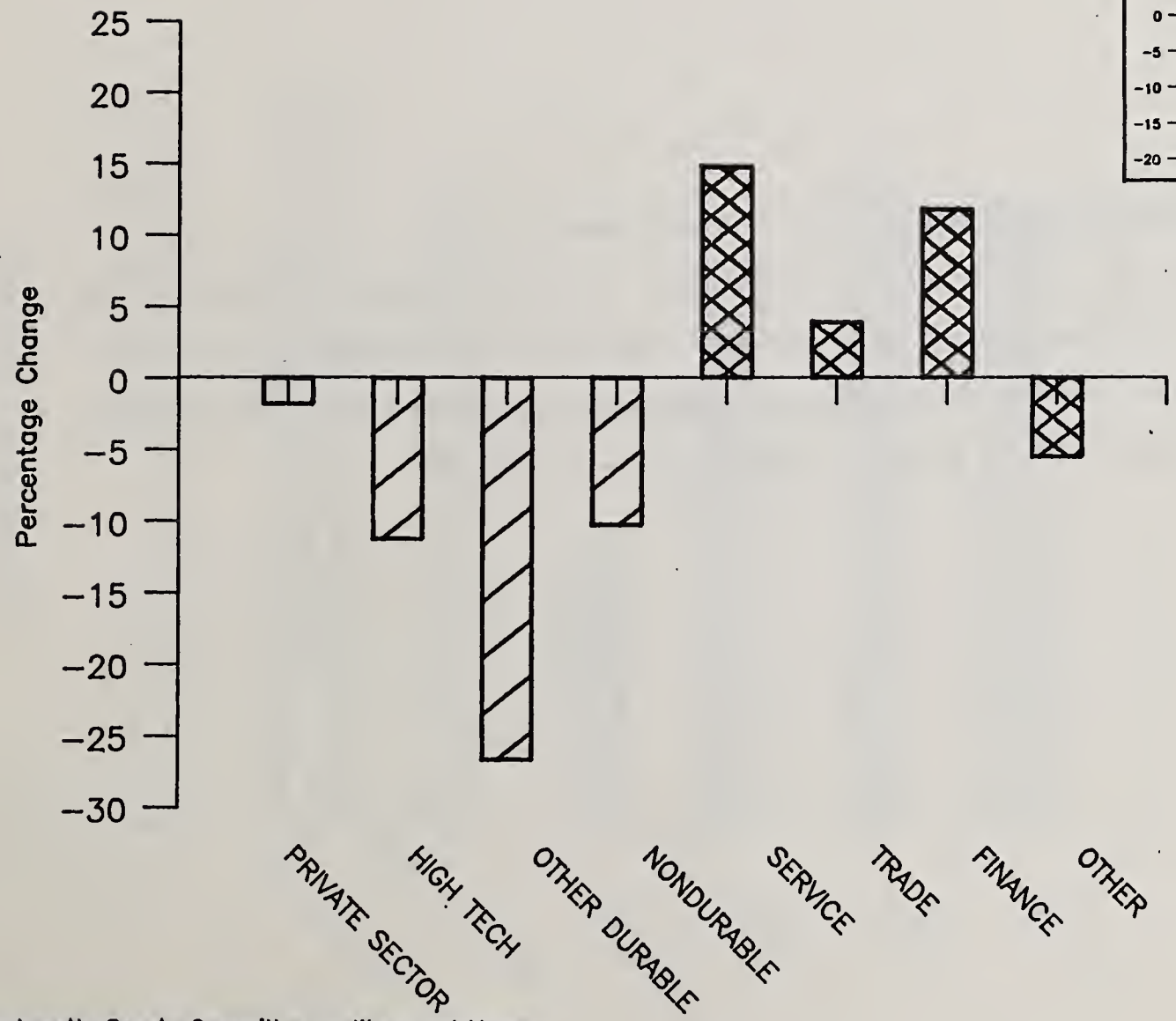
Springfield-Chicopee-Holyoke - 1979-1983 Changes

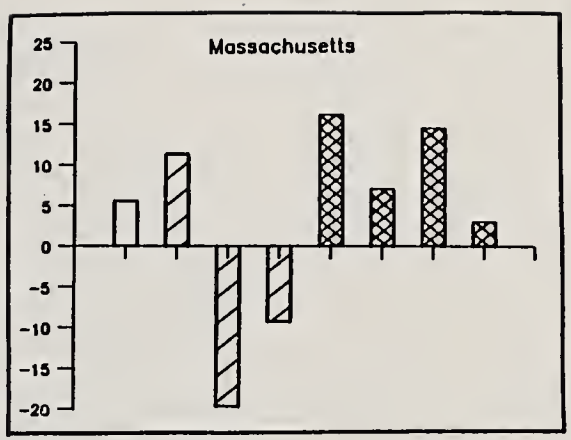
The most recent four years, 1979-1983, were harsh ones for the Springfield-Chicopee-Holyoke LMA. Employment growth in the LMA's nonmanufacturing sectors was not enough to offset job losses in manufacturing. There was a decline in the LMA's total employment during these years.

There were job losses in all categories of manufacturing in the Springfield-Chicopee-Holyoke LMA from 1979-1983, even in high technology. During this period, the LMA's high technology manufacturers experienced an employment decline of 11.3 percent, while the state average of high technology employment increased 11.3 percent. The Springfield-Chicopee-Holyoke LMA's job losses in durable manufacturing industries other than high technology exceeded the state average (26.7 percent compared with 19.7 percent for the state), as did its nondurable manufacturing (10.3 percent compared with 9.7 percent for the state).

In services and trade the LMA had strong growth, parallel with that of the state. The outlook for continued growth in these sectors is good since they were strong even when the LMA's manufacturing was experiencing sharp declines. The Springfield-Chicopee-Holyoke LMA appears to benefit from a market for both its services and finance business which extends beyond the LMA's geographic boundaries.

EMPLOYMENT CHANGE 1979–1983
Springfield



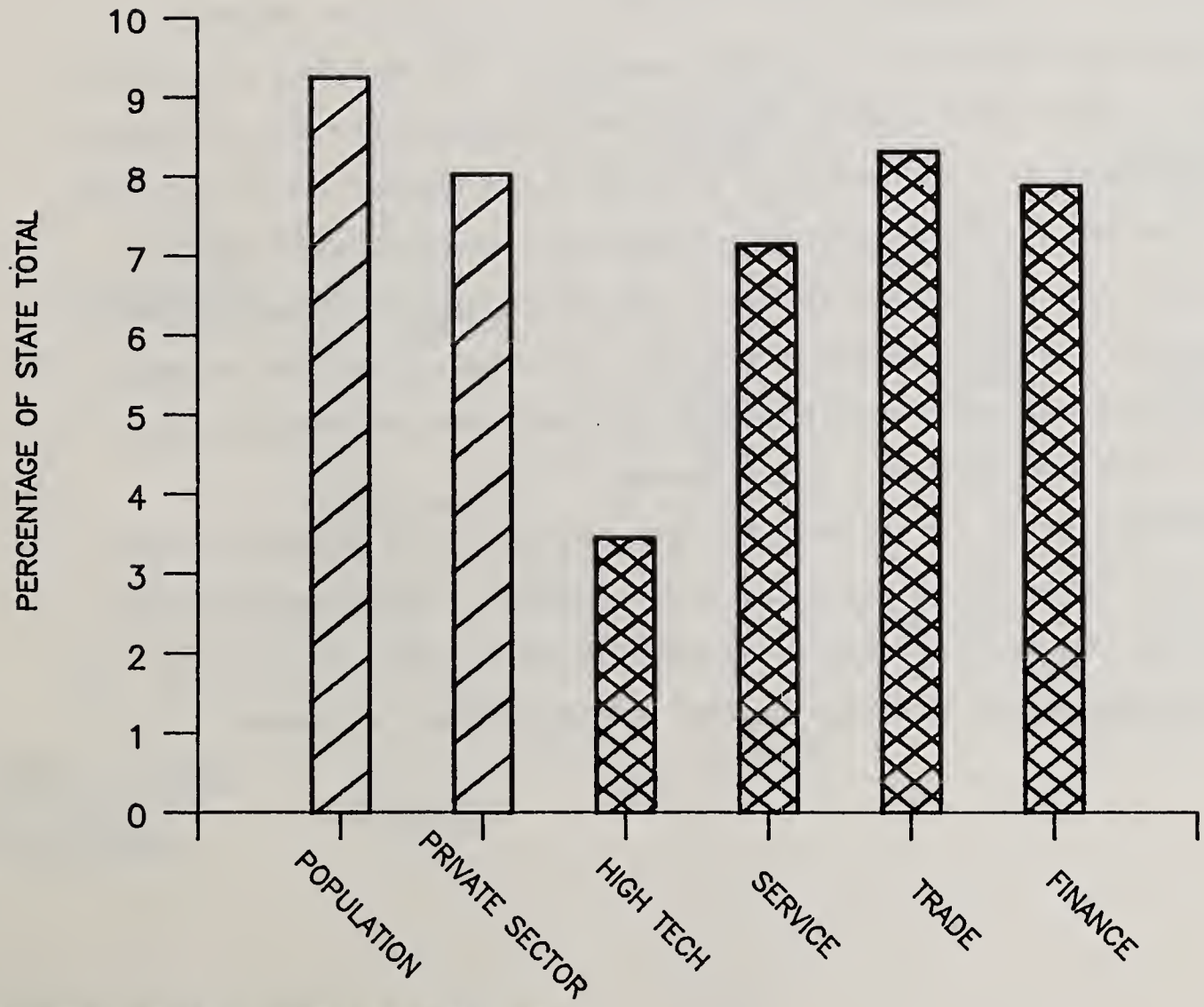


Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

Springfield-Chicopee-Holyoke - Shares of Growth Sectors

In three of the state's four growth sectors -- services, finance, and trade -- the Springfield-Chicopee-Holyoke LMA's shares of the state's total employment are in proportion to its share of total private employment (8.0 percent); but its share of high technology employment is disproportionately low -- 3.4 percent.

SPRINGFIELD SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



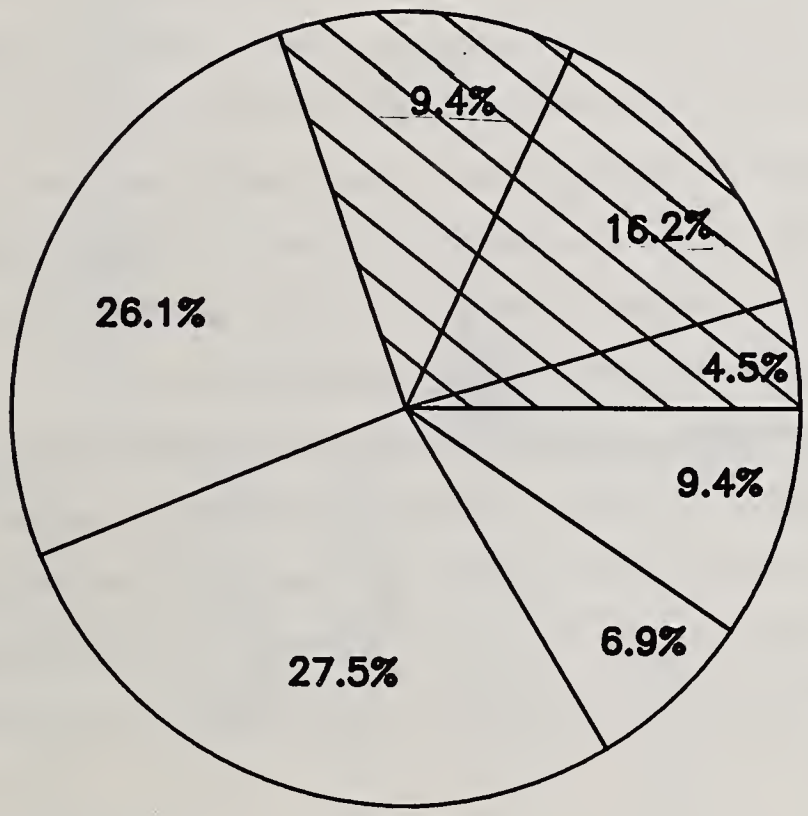
Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

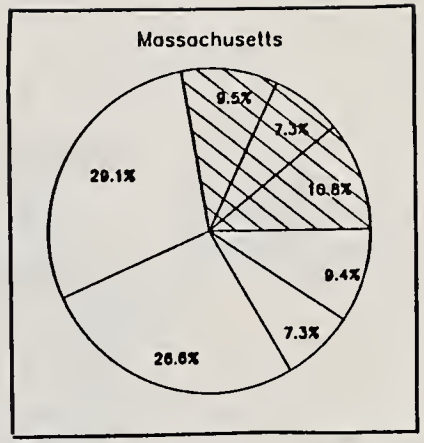
Worcester - Composition

The composition of the Worcester LMA's 1983 employment explains the employment problems the area has experienced in the most recent years. Its relatively large shares of employment in durable manufacturing other than high technology (13.4 percent compared with the state average of 7.3 percent), did not position this LMA well for the 1979-1983 recession. Combined, the manufacturers of primary metals, fabricated metal products (except machinery and transportation equipment), and manufacturers of stone, clay, and glass -- the state's principal durable manufacturing sectors other than high technology -- had statewide employment losses of 19.7 percent, 1979-1983, while the Worcester LMA had job losses in these combined sectors of 25.6 percent.

Fortunately the outlook for the Worcester LMA's manufacturing is probably stronger than is indicated by the current composition of its employment. During the most recent years, 1979-1983, high technology jobs in the Worcester LMA increased 49.1 percent. Only the Lowell LMA had a greater percentage increase in high technology employment.

COMPOSITION OF EMPLOYMENT – 1983
Worcester





NONMANUFACTURING

MANUFACTURING

Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

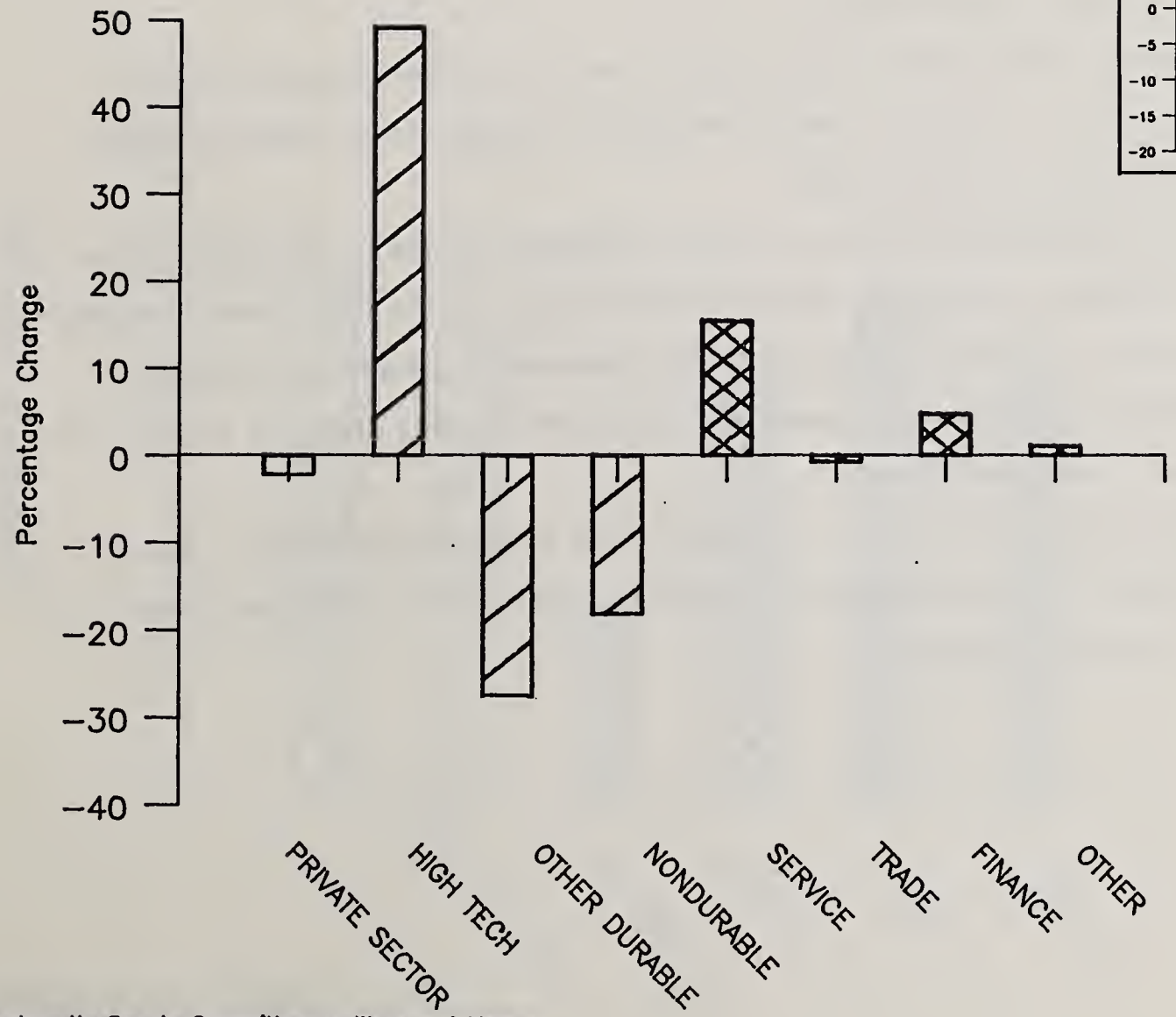
Worcester - 1979-1983 Changes

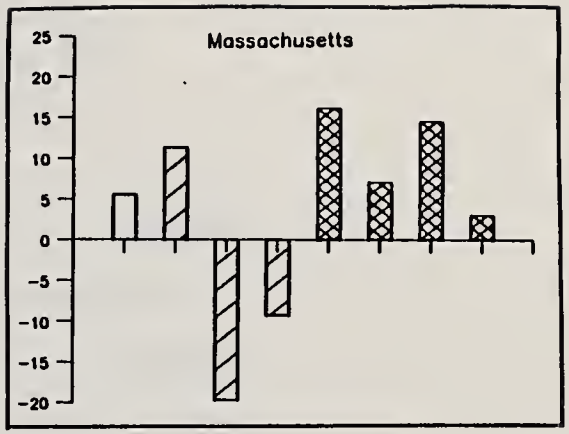
The Worcester LMA's growth in high technology employment during the 1979-1983 period was outstanding -- 49.1 percent compared with the state average of 11.3 percent. The LMA's high technology job growth was second only to that of the Lowell LMA.

On the other hand, during these same years the Worcester LMA's job losses were twice those of the state average in nondurable and in other durable manufacturing (excluding high technology). The job losses in manufacturing other than high technology (30.6 percent during 1979-1983) may eventually benefit this LMA by providing an available supply of skilled employees for expanding high technology manufacturers.

In the three nonmanufacturing sectors which had the fastest statewide employment growth -- services, finance, and trade -- growth in the Worcester LMA was below the state average. During 1979-1983 the Worcester LMA's increase in services employment approached the state average, 15.4 percent compared with 16.1 percent, but the LMA lost jobs in trade, and its finance sector jobs increased at only one-third the statewide rate.

EMPLOYMENT CHANGE 1979–1983
Worcester





Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

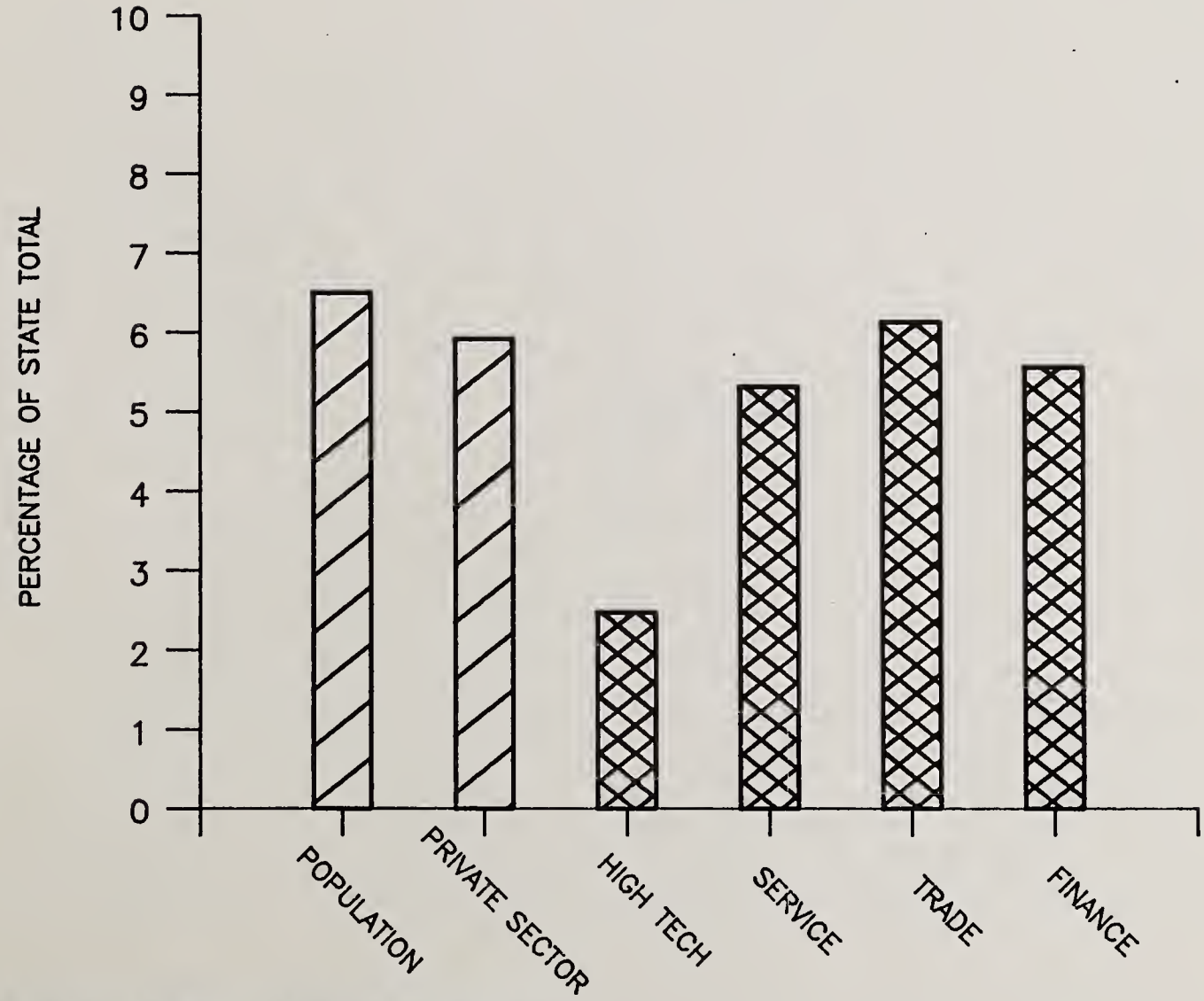
Worcester - Shares of Growth Sectors

The Worcester LMA's shares of three out of four of the state's fastest growing employment sectors -- services, finance, and trade - are equal to or exceed the area's share of the state's total population.

In spite of the Worcester LMA's low rate of employment growth in the finance sector in the most recent years, 1979-1983, the area's share of the state's total finance employment is almost equal to its share of the state's total employment. Together, the Boston, Springfield-Chicopee-Holyoke, and Worcester LMAs account for more than 90.0 percent of the state's total finance employment.

Although the LMA's 1983 share of the state's high technology employment is low relative to its share of total employment, and seventh lowest of the state's major LMAs, it is growing at an above-average rate.

WORCESTER SHARE OF MASSACHUSETTS EMPLOYMENT GROWTH CATEGORIES



Source: Massachusetts Senate Committee on Ways and Means
Data: Massachusetts Division of Employment Security

APPENDICES

Appendix 1

Projected Changes in Massachusetts Employment 1985 and 1986
And Projected Changes in U.S. Employment 1984-1990

Sector	(Percentages of Change over Previous Year) Massachusetts 1985	1986	(Percentage of Change) U.S. 1984-1990
Total nonagricultural	3.0%	2.3%	12.5%
Manufacturing	2.8	1.5	8.6
Durable	4.2	2.5	12.3
High technology[1]			
Nonelectrical	5.7	6.0	21.3
Electrical	4.4	0.9	8.0
Instruments	4.7	3.4	17.7
Other durable			
Primary metals	5.6	3.1	14.6
Fabricated metal	3.4	0.7	14.8
Transportation	(0.2)	0.1	6.7
Nondurable	0.4	(0.2)	
Apparel	(2.0)	(2.3)	(1.4)
Textiles	1.2	0.1	(0.7)
Leather	(0.5)	3.8	(3.4)
Paper	1.7	1.6	3.2
Printing	1.8	0.9	7.5
Nonmanufacturing	3.0	2.6	
Finance	4.6	4.1	18.3
Transportation	1.6	1.0	7.2
Trade	2.8	2.7	13.3
Construction	4.7	2.3	26.3
Services	4.8	4.1	13.6

1. There are no macro economic indicators for high technology employment. The sectors grouped here as high technology are those in which large shares of the sectors' employment are classfied as high technology by the Massachusetts Division of Employment Security.

Sources: Massachusetts projections are from the Senate Committee on Ways and Means economic forecast, Spring 1984; the U.S. projections are from the U.S. Long Term Review, Fall 1984, DRI.

Appendix 2

Annual Average Unemployment Rates 1975-1983
And Average 1984, As of End of August 1984,
Statewide Massachusetts and Nine Major Labor Market Areas

LMA	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Boston	10.5	9.1	7.8	5.8	5.3	5.1	5.8	6.7	5.8	4.1
Brockton	11.7	10.3	9.2	6.5	6.2	6.5	7.3	9.0	8.0	5.4
Fall River	11.6	9.6	9.4	7.3	7.5	8.3	8.8	11.6	9.9	6.1
Lawrence-Haverhill	13.6	12.8	10.1	7.1	7.2	6.2	6.3	10.2	7.8	5.3
Lowell	12.0	10.2	8.4	6.4	5.5	5.1	5.7	7.2	5.5	3.6
New Bedford	14.0	11.5	10.9	8.5	7.5	7.9	9.0	12.3	10.0	6.5
Pittsfield	10.5	9.6	8.7	6.6	5.7	6.1	6.8	8.6	8.3	5.7
Springfield-Chicopee-Holyoke	11.3	9.0	7.1	5.3	4.8	5.9	6.5	7.8	7.4	4.6
Worcester	11.2	8.9	6.7	4.9	4.6	5.2	6.0	8.9	7.6	4.7
Massachusetts Total	11.2	9.5	8.1	6.1	5.5	5.6	6.4	7.9	6.9	4.5

Source: Massachusetts Division of Employment Security

Appendix 3

Massachusetts Annual Pay Levels Compared with the U.S. Average, 1983
And Percentages of Change 1982-1983 by Major and Consolidated Labor Market Areas

Area	Annual Pay Level 1982	Annual Pay Level 1983	Annual Pay Level Rank	Percentage Change 1982-1983 Percent	Percentage Change 1982-1983 Rank
U.S. Metropolitan Average (1)	$17,322	$18,183	--	5.0%	--
Boston-Brockton-Lawrence/Haverhill-Lowell-Salem	17,230	18,365	61	6.6	31
Pittsfield	15,152	15,956	181	5.3	118
Worcester-Fitchburg-Leominster	14,947	15,588	211	4.1	194
Springfield-Chicopee-Holyoke	14,487	15,246	233	5.2	127
New Bedford-Fall River-Attleboro	13,181	13,966	292	6.0	65

Note: There are 315 U.S. metropolitan areas included in the study.

Source: Annual Pay Levels In Metropolitan Areas, 1983 and Percentages of Change 1982-1983, Bureau of Labor Statistics, U.S. Department of Commerce, September 27, 1984.

Summary Employment Statistics - Massachusetts and Nine Major Labor Market Areas

Category	Massachusetts	Boston	Brockton	Fall River	Lawrence	Lowell	New Bedford	Fitchburg	Springfield	Worcester
1980 Population	5743000	2763357	169374	176831	281981	233410	169425	130471	539668	372940
1980 Population % State	100.00%	48.12%	2.95%	3.08%	4.91%	4.06%	2.95%	2.27%	9.24%	6.49%
Private Sector Total	2285311	1296807	46138	45623	83452	73831	56389	44931	183018	135039
Private Sector % State	100.00%	56.75%	2.02%	2.00%	3.65%	3.23%	2.47%	1.97%	8.01%	5.91%
Private Sector Per Pop	39.79%	46.93%	27.24%	25.80%	29.59%	31.63%	33.28%	34.44%	34.49%	36.21%
Private Sector % 1975-1983	21.90%	23.54%	19.67%	10.34%	13.37%	54.87%	15.57%	2.12%	10.72%	16.37%
Private Sector % 1975-1979	15.51%	14.39%	17.17%	11.81%	7.17%	25.98%	14.32%	5.04%	12.78%	19.01%
Private Sector % 1979-1983	5.54%	8.01%	2.14%	-1.32%	5.79%	22.93%	1.09%	-2.78%	-1.83%	-2.22%
Manufacturing Total	632198	284415	11279	19127	37279	34302	23731	15674	56479	40716
Manufactur.% State	100.00%	44.99%	1.78%	3.03%	5.90%	5.43%	3.75%	2.48%	8.93%	6.44%
Manufactur.Per Pop	11.01%	10.29%	6.66%	10.82%	13.22%	14.70%	14.01%	12.01%	10.64%	10.92%
Manufactur. % Priv.Sector	27.66%	21.93%	24.45%	41.92%	44.67%	46.46%	42.09%	34.88%	30.86%	30.15%
Manufact % 1975-1983	9.56%	13.70%	2.54%	-1.33%	-0.68%	70.95%	9.65%	-21.93%	-5.33%	-2.99%
Manufact.% 1975-1979	16.40%	16.82%	14.66%	4.05%	-0.81%	29.45%	22.03%	-8.46%	14.44%	16.20%
Manufact.% 1979-1983	-5.88%	-2.67%	-10.58%	-5.18%	0.14%	32.05%	-10.14%	-14.72%	-17.28%	-16.51%
Durable	413399	189705	5776	3371	25277	25633	8851	10555	29319	27510
Durable % State	100.00%	45.89%	1.40%	0.82%	6.11%	6.20%	2.14%	2.55%	7.09%	6.65%
Durable % Manufact.	65.39%	66.70%	51.21%	17.62%	67.80%	74.73%	37.30%	67.34%	51.91%	67.57%
Durable % of Priv. Sect.	18.09%	14.63%	12.52%	7.39%	30.29%	34.72%	15.70%	23.49%	16.02%	20.37%
Durable % 1975-1983	20.56%	19.61%	15.75%	38.72%	8.97%	163.61%	24.40%	-25.95%	-7.48%	-0.25%
Durable % 1975-1979	25.12%	27.10%	18.72%	47.20%	6.10%	53.43%	39.38%	-15.07%	19.83%	19.29%
Durable % 1979-1983	-3.65%	-5.90%	-2.50%	-5.76%	2.70%	71.80%	-10.75%	-12.81%	-22.79%	-16.38%
High Tech Total	247045	130449	3109	1462	20660	22435	4355	7980	8504	6077
High Tech % of State	100.00%	52.80%	1.26%	0.59%	8.36%	9.08%	1.76%	3.23%	3.44%	2.46%
High Tech % Manufact.	39.08%	45.87%	27.56%	7.64%	55.42%	65.40%	18.35%	50.91%	15.06%	14.93%
High Tech % Priv Sect.	10.81%	10.06%	6.74%	3.20%	24.76%	30.39%	7.72%	17.76%	4.65%	4.50%
High Tech % 1975-1983	47.38%	46.37%	37.32%	80.27%	8.31%	218.32%	53.89%	-30.43%	13.93%	175.10%
High Tech % 1975-1979	32.42%	35.34%	27.56%	70.04%	-0.23%	69.38%	55.94%	-19.46%	28.40%	84.47%
High Tech % 1979-1983	11.30%	8.16%	7.65%	6.02%	8.55%	87.93%	-1.31%	-13.62%	-11.27%	49.13%
Other Durable	166354	59256	2667	1909	4617	3198	4496	2575	20815	21433
Other % of State	100.00%	35.62%	1.60%	1.15%	2.78%	1.92%	2.70%	1.55%	12.51%	12.88%
Other % of Manufct.	26.31%	20.83%	23.65%	9.98%	12.38%	9.32%	18.95%	16.43%	36.85%	52.64%
Other % of Priv. Sect.	7.28%	4.57%	5.78%	4.18%	5.53%	4.33%	7.97%	5.73%	11.37%	15.87%
Other % 1975-1983	-5.09%	-14.72%	-2.16%	17.91%	12.01%	19.51%	4.92%	-7.51%	-14.08%	-15.51%
Other % 1975-1979	18.15%	16.54%	11.37%	35.76%	35.40%	11.43%	28.45%	3.02%	17.19%	13.62%
Other % 1979-1983	-19.67%	-26.82%	-12.15%	-13.15%	-17.27%	7.24%	-18.31%	-10.22%	-26.68%	-25.64%
Non-durable	217335	83299	5499	15694	11676	8585	14860	5116	27052	12822
Non-durable % State	100.00%	38.33%	2.53%	7.22%	5.37%	3.95%	6.84%	2.35%	12.45%	5.90%
Non-durable % Manufact.	34.38%	29.29%	48.75%	82.05%	31.32%	25.03%	62.62%	32.64%	47.90%	31.49%
Non-dur.% Priv. Sect.	9.51%	6.42%	11.92%	34.40%	13.99%	11.63%	26.36%	11.39%	14.78%	9.50%
Non-dur.% 1975-1983	-6.72%	-8.35%	-8.62%	-7.19%	-24.02%	-16.96%	2.25%	-12.16%	-2.83%	-10.40%
Non-dur.% 1975-1979	3.33%	-1.43%	5.88%	-2.13%	-10.66%	6.83%	13.36%	7.49%	8.30%	10.16%
Non-dur.% 1979-1983	-9.72%	-7.02%	-13.70%	-5.16%	-14.96%	-22.27%	-9.80%	-18.27%	-10.28%	-18.66%

Category	Massachusetts	Boston	Brockton	Fall River	Lawrence	Lowell	New Bedford	Pittsfield	Springfield	Worcester
Non-manufacturing Total	1653113	1012392	34859	26497	46173	39529	32649	29257	126539	94323
Non-manufact.% State	100.00%	61.24%	2.11%	1.60%	2.79%	2.37%	1.98%	1.77%	7.65%	5.71%
Non-manufact.Per Pop	28.78%	36.64%	20.58%	14.98%	16.37%	16.94%	19.27%	22.42%	23.85%	25.29%
Non-manufact.% Priv.Sect.	72.34%	78.07%	75.55%	58.08%	55.33%	53.54%	57.91%	65.12%	69.14%	69.85%
Non-manufact.% 1975-1983	27.38%	26.62%	26.52%	20.64%	27.99%	43.18%	20.29%	-14.70%	19.78%	27.34%
Non-manufact.% 1975-1979	15.11%	13.63%	18.17%	18.66%	15.48%	23.46%	8.17%	17.55%	11.85%	20.60%
Non-manufact.% 1979-1983	10.67%	11.44%	7.06%	1.67%	10.84%	15.98%	11.20%	-27.43%	7.10%	5.59%
Services	664228	437047	10448	8964	17435	13315	10463	11940	47281	35225
Services % State	100.00%	65.80%	1.57%	1.35%	2.62%	2.00%	1.58%	1.80%	7.12%	5.30%
Services % Nonmanufact.	40.18%	43.17%	29.97%	33.83%	37.76%	33.68%	32.05%	40.81%	37.36%	37.35%
Services % Priv Sect.	29.07%	33.70%	22.65%	19.65%	20.89%	18.03%	18.56%	26.57%	25.83%	26.89%
Services % 1975-1983	45.99%	46.10%	49.04%	23.25%	48.79%	64.93%	33.35%	35.34%	33.82%	43.58%
Services % 1975-1979	25.78%	26.96%	24.49%	19.94%	21.85%	36.02%	12.02%	13.98%	16.67%	24.40%
Services % 1979-1983	14.07%	15.07%	19.72%	2.76%	22.11%	21.25%	19.05%	18.75%	14.67%	15.42%
Trade	607356	336235	16077	11640	17736	17710	13575	11919	50291	37080
Trade % State	100.00%	55.36%	2.65%	1.92%	2.92%	2.92%	2.24%	1.96%	8.28%	6.11%
Trade % Nonmanufact.	36.74%	33.21%	46.12%	43.93%	38.41%	44.80%	41.58%	40.74%	39.74%	39.31%
Trade % Priv. Sect.	26.58%	25.93%	34.85%	25.51%	21.25%	23.99%	24.08%	26.53%	27.48%	27.46%
Trade % 1975-1983	18.42%	14.99%	17.51%	28.08%	14.65%	35.97%	11.51%	22.85%	12.39%	22.90%
Trade % 1975-1979	10.64%	7.11%	15.13%	25.08%	10.52%	18.80%	3.17%	25.92%	8.20%	23.81%
Trade % 1979-1983	7.04%	7.36%	2.07%	2.40%	3.73%	14.45%	8.08%	-2.44%	3.87%	-0.73%
Finances	167508	117533	2207	2668	3885	2346	2007	2242	13154	9275
Finances % State	100.00%	70.17%	1.32%	1.59%	2.32%	1.40%	1.20%	1.34%	7.85%	5.54%
Finances % Nonmanufact.	10.13%	11.61%	6.33%	10.07%	8.41%	5.93%	6.15%	7.66%	10.40%	9.83%
Finance % Priv. Sect.	7.33%	9.06%	4.78%	5.85%	4.66%	3.18%	3.56%	4.99%	7.19%	6.87%
Finances % 1975-1983	27.33%	30.03%	33.27%	22.22%	22.67%	24.72%	19.89%	13.12%	23.41%	16.10%
Finances % 1975-1979	11.26%	11.04%	18.48%	17.59%	13.58%	5.85%	16.61%	16.90%	10.46%	10.83%
Finances % 1979-1983	14.45%	17.10%	12.49%	3.93%	8.01%	17.83%	2.82%	-3.24%	11.72%	4.75%
Other Non-manufacturing	214021	121577	6127	3225	7117	6158	6604	3156	15813	12743
Other % of State	100.00%	56.81%	2.86%	1.51%	3.33%	2.88%	3.09%	1.47%	7.39%	5.95%
Other % Nonmanufact.	12.95%	12.01%	17.58%	12.17%	15.41%	15.58%	20.23%	10.79%	12.50%	13.51%
Other % of Priv. Sect.	9.37%	9.38%	13.28%	7.07%	8.53%	8.34%	11.71%	7.02%	8.64%	9.44%
Other % 1975-1983	7.92%	3.39%	17.69%	-5.70%	24.42%	33.06%	21.20%	-7.58%	6.13%	12.00%
Other % 1975-1979	4.74%	-2.11%	17.56%	-0.44%	16.89%	21.82%	11.19%	-4.86%	12.33%	10.78%
Other % 1979-1983	3.03%	5.61%	0.11%	-5.29%	6.45%	9.22%	9.01%	-2.86%	-5.52%	1.09%

7342 013

ACME
BOOKBINDING CO., INC.

AUG 26 1998

100 CAMBRIDGE STREET
CHARLESTOWN, MASS.